BEYOND AESTHETICS: EVALUATING SOCIAL OUTCOMES OF ADAPTIVE REUSE

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Abstract

The fields of historic preservation and architecture claim various social benefits of their work, but the assertions rest on limited scholarly research. Social outcomes are particularly important in the historic built environment because social intention is embedded in the designation of historic buildings. Design in historic built environments (such as adaptive reuse), therefore, is a critical common ground of architecture and preservation practice. The research aims to inform architectural practice in relationship to the historic built environment and social outcomes. The methodology targets current architectural practice in the historic built environment through a critical review of literature—with particular emphasis on literature concerning post-occupancy evaluation—and interviews with architects, which served to gain insight into practice.

The findings elucidate paradigms and draw out deficiencies in architectural practice concerning social outcomes in relation to the historic built environment. The research finds that architects do have agency in setting preservation intentions. However, differing perceptions of what constitutes social benefit, limited metrics of social benefit offered in the literature, and barriers to post-occupancy evaluation in practice hinder architect involvement in assessing social benefits of adaptive reuse. Recommendations strive to incorporate findings into architectural practice, including capitalizing on existing opportunities for expanding post-occupancy evaluation.

Advisor: Erica Avrami

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Chapter 1
Introduction + Research Framework

1.1 Research Rationale

Architecture's self-image is built on an assumption of public good that extends beyond the property. It is a field that presents itself as pushing the boundaries of conventional fields, supporting social benefit, and planting the seeds of substantive change through design. The aspiration behind the plazas of modernism and the grand entrances of Beaux Arts buildings speaks to this self-image of public benefit. Architecture (including historic preservation) claims that the built environment offers social benefit far beyond the property line. Practitioners recognize that the built environment impacts many facets of life (part of the self-image), but particularly in recent years there has been a rise in research into those impacts. Climate impacts of the built environment—study of vulnerable infrastructure and populations, building lifecycle assessments, operational energy use, for instance—have created urgency around building outcomes, building on a body of research that emerged in the mid-20th century. The built environment impacts many aspects of our world, including social networks, personal connections and other aspects of social outcomes (Fig. 1).

The field of architecture asserts that design is a tool for improving quality of life. The American Institute of Architects (AIA), for instance, takes the position that social impact is (or should be) important to architects. The AIA cites "use of design, community engagement, and culture to improve equity and quality of life for all."[1] Within historic preservation, social outcomes of architectural intervention take on particular importance because social intent is embedded in the designation of historic buildings. Professional historic preservation organizations, such as the National Trust for Historic Preservation (the Trust), have increasingly prioritized social benefit. The Trust states that "positively [affecting] the communities where we work" is a key part of the organization's values.[2] Not least of all, legal and policy justifications for historic preservation form the basis for the social value of heritage.[3]

Despite widespread justification in the field and importance to self-image, social outcomes are an understudied category of evaluation. While the field of architecture asserts the "social benefit," "social value," or "public interest" of the work, the exact meaning of these terms is unclear. The dictionary definition of social is: "of or relating to human society, the interaction of the individual and the group, or the welfare of human beings as members of society."[4] The word "outcomes" indicates direct "observed effects" of some action and connotes neutrality, while value or benefit connote a positive outcome.[5] Architecture's claim of social benefits necessitates examination of the meanings attached to "social outcome" and related terms in scholarly and professional literature.

In architecture, the field conceives social outcomes broadly: as improved quality of life, public access, personal connection to place, and meeting community needs (through program). An examination of social outcomes in the field of architecture leads to a sector of projects termed "public interest" or "humanitarian" design. "Public interest" often refers to

1 "Architectural Research - AIA"; "Engaging Community - AIA."

2 "National Trust Values in Action."

3 Avrami, Leo, and Sanchez, "Confronting Exclusion." A discussion of the way the field talks about social outcomes will follow in the subsequent section.

4 Miriam-Webster, definition 3. https://www.merriam-webster.com/dictionary/social

5 Stannard-Stockton, "Getting Results." The term "impact," while similar to "outcome," tracks the link between observed outcomes and actions to understand the degree to which an outcome is directly linked to an action. (such as overall health being linked to losing weight). Emphasis added.

architecture and design that is made accessible for those who could not necessarily afford a designer's fees while providing spaces to fulfill a need, but is sometimes understood very broadly. In fact, a 2013 study of public interest practice revealed that, of those surveyed, 80% of architects believed that they practiced public interest design by "putting their creative abilities to use to improve quality of life in communities."[6] Urban design literature concerned with public space discusses social outcomes in terms of supporting community needs, offering publicly-accessible spaces, and emphasizing personal connections to place.[7]

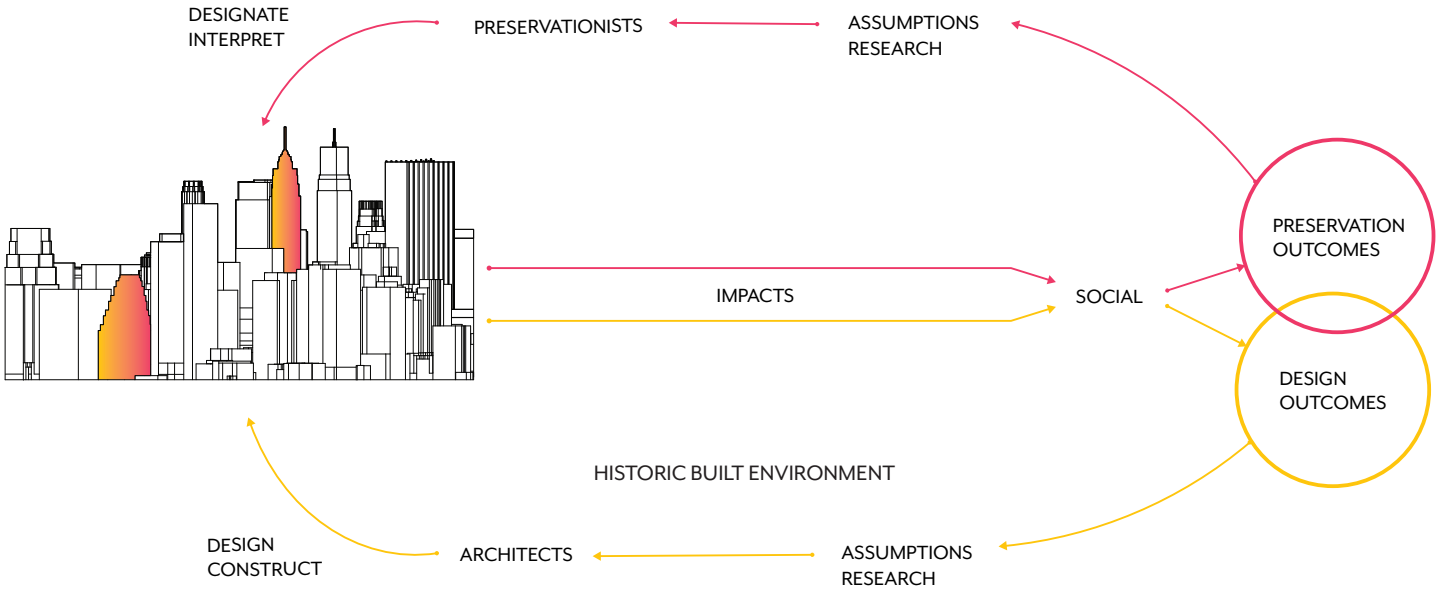

Figure *1 Diagram of current cycle of social outcomes assessment. Diagram by author.*

In historic preservation literature, social outcomes have been viewed as critical for policy justification, non-profit advocacy work, and theoretical framing. The exercise of defining and measuring social outcomes has resulted in definitions based in economic, legal, and cultural terms. However, preservation literature more frequently considers social value of heritage, rather than social outcomes of heritage, so the literature deals primarily with definitions of social value.

Preservation outcomes research primarily considers economic outcomes, even using economic terms to define social value. Efforts to define social value in economic terms abound, but coalesce around the concept that the social is that which exists outside of private or market value. Sable proposes an assessment of heritage in terms of cultural capital,[8] while Schuster and de Monchaux simply characterize social values as benefit accrued outside of market value.[9] O'Brien argues that indirect economic outcomes can and should be considered for a more holistic view of outcomes,[10] supported by Mason's argument that "social value stems from the collective use of a heritage place for other than heritage reasons."[11]

In American law and legal scholarship, discussion of social outcomes is framed relative to the patriotic rationale for the National Historic Preservation Act of 1966. The Act attributes public benefits to heritage, stating in Section 1 that "the spirit and direction of the Nation are founded upon and reflected in its historic heritage."[12] Hutt et. al. situate the NHPA in the lineage of the Antiquities Act and the Historic Sites Act, stating that it "adheres to the public policy that historic properties have a value to all of the public."[13] Key public benefits of heritage include education (particularly education in support of patriotism), "strengthened sense of community identity, cohesion, and pride," engagement in democratic processes, and "distributive justice."[14] In terms of education, Shuster & de Monchaux state that the education value is of value to society and "[differs]... from

6 Feldman et al., "Wisdom From the Field: Public Interest Architecture in Practice," 3.
7 Marcus and Francis, *People Places: Design Guidelines for Urban Open Space, 19–20.*
8 Wilkinson, Remoy, and Langston, "Preserving Cultural and Heritage Value."
9 de Monchaux and Schuster, "Five Things to Do," 7–8.
10 Pierce O'Brien, "Measuring the Full Economic Impacts of Local Historic District Designations."
11 Mason, "Be Interested and Beware: Joining Economic Valuation and Heritage Conservation," #305.
12 National Historic Preservation Act of 1966, 35.
13 Hutt, Blanco, and Varmer, *Heritage Resources Law*, 8.
14 Hutt, Blanco, and Varmer, 2; Rose, "Preservation and Community: New Directions in the Law of Historic Preservation"; Alexander, "Hip-Hop and Housing: Revisiting Culture, Urban Space, Power, and Law," 805.

purely economic motivations."[15]

In both preservation and architecture contexts, the social outcomes of a sense of place, sense of community, and sense of identity, tip-toe into a sector of preservation theory that prioritizes people and community. The value people ascribe to a building or site, derived from collective memory, cultural value, and inclusivity is seen as paramount, explored in the work of Hayden, Smith, and others.[16] Efforts to understand, collect, and include these community-generated values in preservation practice have informed recent innovative heritage conservation literature.[17]

Architecture and urban design understand social outcomes to derive from program-related outcomes, public access to a site, and personal connection to a place. Preservation literature considers economic, legal, and cultural definitions of social outcomes that consider the extra-market value of heritage in economic terms, the government-defined value of heritage to society, and the collective cultural importance of historic places. Key terms emerge in this review of literature: justice, democracy, access (both to spaces and amenities), inclusivity, personal connection. The aspirational tone of these terms underlines a sense of hope that the built environment can impact social context in myriad and significant ways. The importance of social outcomes in existing and historic built environments is evidenced in the breadth of literature addressing the social value of historic preservation, not least of all the legal arguments. The literature suggests that the historic built environment is a lightning rod of social value, which makes intervention in the historic built environment particularly charged. However, the actual social outcomes of the built environment are known in only limited ways. Research to support these assertions and tools for corroborating both the social benefits of heritage and architecture are limited. While economic impacts of adaptive reuse are a more frequent subject of advocacy and academic research, economic outcomes offer only one view of success, leaving many gaps in existing research.

Architects and preservationists seek to achieve social benefits through their work in the built environment. The work of architecture and preservation intersects when operating in the historic built environment,[18] in which designation at any level of government indicates a historic, architectural, or cultural significance to the public. Design interventions in the historic built environment, therefore, offer a common ground for the paradigms of architecture and preservation practice—and implied social benefit agendas—that each practice brings to the historic built environment. Adaptive reuse, for instance, offers a robust point of intersection of architect and preservation practices with the historic built environment. The process of adaptive reuse involves not only physical transformation, but programmatic transformation. Architects are tasked with solving the problem of transformation, while navigating the functional needs and the treatment of the historic building or site. The critical role of framing projects and educating clients belongs falls to the architect. Adaptive reuse as a project type is important to architects, as well. Work on existing buildings[19] accounts for almost half of architecture billings. Since 2011, renovation, retrofitting, and adaptive reuse of existing buildings has comprised almost half of all architecture firm billings. Specifically, it has hovered between 43% and 45% of architecture work, according to a 2019 AIA report.[20] Adaptive reuse, bringing together architectural practice, historic preservation practice, social outcomes, the historic built environment, and relevance to current practice, is a rich intersection point for exploring the social outcomes in the historic built environment.

1.2 Research Aims & Methodology

Architecture and historic preservation both claim social outcomes of their work. The asserted importance of social outcomes of the historic built environment belies the limited body of research into social outcomes. For the preservation field, especially, it is critical to engage more with capturing social outcomes of adaptive reuse because the field hinges on an assumption of social benefit underpinning legal and policy justifications. Where architecture and historic preservation practice intersects, in adaptive reuse, there are unanswered questions about what social outcomes architects seek in adaptive reuse,

15 de Monchaux and Schuster, "Five Things to Do," 10.

16 Hayden, *The Power of Place*; Smith, *Uses of Heritage*.

17 van der Linde and Mans, "Visualising Values in the Caribbean: A Creative Approach to Value Assessment"; Leo, "'When I'm Dead, Demolish It': Contradictions and Compromises in Preserving Values at Lee Kuan Yew's Oxley Road Home, Singapore"; Avrami, Mason, and de la Torre, "Values and Heritage Conservation."

18 "Historic built environment," as opposed to "existing built environment" refers a human-made environment that has been designated by a preservation agency.

19 Historic buildings are a subset of all existing buildings and constitute a large portion of architecture projects.

20 Logan, "Renovate, Retrofit, Reuse: Uncovering the Hidden Value in America's Existing Building Stock."

how practitioners evaluate project success, and what (if any) impediments or improvements to tracking social outcomes of adaptive reuse might include. Therefore, the research aims to inform architectural practice in relationship to the historic built environment and social outcomes.

1. The main research questions ask:

2. How do practitioners evaluate project success?

3. What social outcomes do practitioners seek in adaptive reuse projects?

What are the opportunities, obstacles, and recommendations for architects to establish frameworks for capturing social outcomes of intervention in the existing built environment?

The thesis approaches the research questions through a mixed methodology. Research includes a critical examination of scholarly research on social benefits and outcomes research, and the guidance documents produced by professional associations, such as American Institute of Architects (AIA) and the National Trust for Historic Preservation (The Trust). To further understand how these ideas or others translate into practice, the research methodology includes a comparative practices analysis and interviews with architects who have worked on adaptive reuse projects. The comparative practices analysis considers practices—both within architecture and historic preservation, and practices in allied fields—that prioritize social context, work to establish social outcomes metrics, and conduct social outcomes assessments. The interview methodology sets up a comparison between these socially-committed practices and adaptive reuse practices. This mixed methodology aims to produce practical, contextual, real-world knowledge about the professional practice and beliefs of architects involved in adaptive reuse projects in the context of academic and professional literature. The methodology offers a way to understand the complexity and diversity of architectural practice—the many factors involved in decision-making and design. The methodology sets up an evaluation of the role architects currently have in setting project intentions, making design decisions, and setting frameworks for post-occupancy project evaluation. Findings and analysis will support recommendations for architects to enact social outcomes evaluations in adaptive reuse projects.

Adaptive reuse is a practice area in which architecture and preservation practices intersect, therefore this project type acts as tool in this thesis for focusing the research questions. Defined as the transformation of a building or other built site by a new use, the historic preservation field views adaptive reuse as an effective strategy for preserving built heritage. By the nature of these types of projects, there are a number of stakeholders and factors to study. It will be critical to understand primary drivers in the typical adaptive reuse project, and how each factor influences an adaptive reuse project. Architecture organizations claim an important role for architects in the adaptive reuse process. As a transformational and complex project type, the architect certainly supports a successful outcome. In fact, the AIA advocates for and recognizes the scale of impact architects can have on shifting the way buildings impact communities. “Buildings in the United States are tremendously impactful—contributing a significant share of GDP. Architects play a critical role in the outcome of these buildings, which affect all levels of scale—from the individual to larger society.”[21] As mentioned above, adaptive reuse projects are a steady and growing percentage of architecture billings. The AIA sees adaptive reuse in particular as “one of our greatest opportunities” to “unlock social and economic benefits” and “[reduce] the building sector’s environmental impact.”[22] The advocacy stance that architects are in a position to impact social outcomes of adaptive reuse adds further support to a methodological approach focused on the current and potential role of architects.

The methodological focus on the role of architects also challenges the more case study methodology. The field of architecture exhibits a research tendency towards the case study methodology. In architectural education and practice, the case study methodology is both familiar and serves as a means to understand precedent projects and context.[23] However, the mixed methods methodology used in this thesis sets up a framework to ask questions of architectural practice that may lie outside of a particular case. Instead, with the goal of understanding and recommending changes to existing practice, this thesis employs a methodology that targets practitioners, their professional process, their personal beliefs, and the beliefs at the core of their firms. In other words, the methodology studies adaptive reuse at the systemic level, rather than the case or project level. A qualitative methodology, contextualized in a review of the literature, will generate data about the framework of practice, rather than discrete projects.

21 “Architectural Research - AIA.”

22 Logan, “Renovate, Retrofit, Reuse: Uncovering the Hidden Value in America’s Existing Building Stock,” 5.

23 Sarvimaeki, “A Case Study on Case Studies.”

Methods of data collection

The literature review in Chapter 2 takes a critical eye to scholarly research within historic preservation, architecture, and allied fields, as well as guidance documents produced by professional organizations. Topics studied include definitions and practice related to social outcomes, post-occupancy evaluation research and practice, and literature addressing current practice, research, and experimentation in establishing qualitative metrics and collecting qualitative outcomes data.

The comparative practices analysis, concentrated in Chapter 3, studies practices in architecture, preservation, and allied fields with a strong, explicit commitment to social outcomes. Practices share a common mission to examine social context, deploy social context to establish metrics, and evaluate project outcomes relative to social outcomes metrics. The data includes scholarly literature, guidance documents from the practices in questions, and an interview with a non-architect practitioner. Comparison between the practices in question provides critical language for discussing social outcomes evaluation and alternate modes of practice as a point of comparison in the context of the larger thesis research.

Chapters 4-6 relate data collected through interviews with practicing architects. Interviews consisted of two parts: first, a short, multiple choice section, and second, a series of open-ended questions (see Appendix A for full list of questions). The multiple-choice section consisted of seven questions with a range of potential answers, from which interviewees could select a specified number of answers. Three questions allowed only one answer, three allowed 2-3 answers, and one allowed as many answers as applied. In all cases, interviewees were given the option to offer answers not listed. All questions were recorded on a paper survey by the interviewer in the presence of interviewee and later filled into a Google Survey by the interviewer to compare answers. The open-ended section consisted of 12 questions grouped into categories: Research, Design, and Outcomes.

The interviewees included seven architects and one non-architect employed by an architecture firm, eight in all. The interviews were not intended to produce a holistic, representative view of current practice in the field. Rather, interviews offered insight into perspectives amongst architects, which could in turn inform additional inquiries. The mixed methodology required interviewees who could speak specifically and as experts in a structured interview. As such, the architects interviewed had all worked on adaptive reuse projects, or in the case of one architect, on a project deeply connected to a historic building. The architects work at a range of scales and project types, and come from a range of academic backgrounds (with and without preservation degrees, some with other types of degrees) and firm types. As noted above, one interviewee is not an architect. The selection of this person was based on the interviewee's familiarity with capturing social outcomes data and this interviewee's responses have been analyzed separately—in Chapter 3. The author recruited participants through personal and professional contacts, primarily located in New York City. Interviews ranged from 30 minutes to over an hour and took place at the interviewee's place of work. Audio for all interviews was recorded on the author's personal device with the permission of the interviewee along with the author's handwritten notes. A printed survey for all in-person interviews (one interview conducted over phone) was offered to interviewees to follow along with questions. No questions were sent ahead of time to interviewees.

Methods of Analysis

The multiple-choice portion of the interviews is not intended to be analyzed statistically, but rather, to prime interviewees for open-ended questions and supplement open-ended responses for more structured responses. It is important to note that participants often responded to multiple-choice questions with long, free-form answers. The qualitative analysis is based on recording and transcription of interviews, including any free-form answers that came out of the quantitative multiple-choice section. The author transcribed interviews, annotated them, extracted key ideas and direct quotes, then organized answers based on thematic questions.

Interview questions were crafted to elicit specific information, such that answers were already coded to pertain to one of the three overarching thematic questions:

1. How do architects research the existing building at the beginning of an adaptive reuse project?
2. How do architects work through the design process of an adaptive reuse project?
3. What is and could be the role of the architect in establishing metrics by which outcomes might be measured?

The interview questions—including the overarching thematic questions—utilize neutral language as much as possible. The first set of questions deals with the pre-design phase, asking interviewees to consider their research and analysis of historic buildings. The second set of questions about the design process seeks to tease out information about how interviewees make design decisions, with the aim of eliciting data about what role architects have at different stages in an adaptive reuse project. The third thematic set of questions deals with outcomes, primarily to learn how interviewees evaluate their projects after project completion. The thematic nature of interview questions allows a reading of interview responses based on topic, as well as a finer-grained analysis of the language interviewees used.

The language in the questions attempts neutrality by avoiding terminology that might be misleading or fraught. Therefore, the analysis of interview responses paid particular attention use of these terms. The term "significance," for instance, can mean different things in different contexts. In preservation there is a specific connotation to the term, whereas in architecture or allied fields the meaning is broader. In a historic preservation context, "significance" often refers to the statement of significance, which summarizes the rationale for designating a historic site. The bodies that regulate historic sites use criteria that falls into architectural, historical, and cultural categories. A values-based theory of preservation offers a different way of determining significance that prioritizes what people deem important about a site.[24] While not the main focus of this thesis, significance is a key element in adaptive reuse and various interpretations of "significance" will contribute to the research findings.

Likewise, "narrative" surfaces frequently in conversations about adaptive reuse, but there are subtle shifts in meaning in different contexts. Some preservationists and allied professionals use "narrative" to mean personal or collective identity, the cultural frame or lens through which a person or group views events, places, etc. Lisa Alexander emphasizes the importance of telling diverse and inclusive narratives: "Narratives can influence behavior because individuals often choose to act in a way that is consistent with their personal narratives and identities."[25] In an architectural context, "narrative" may relate to a personal narrative or may take on a meaning that describes the storytelling behind the design. For many interviewees, "narrative" refers to the framing of their projects. "Narrative," therefore, can shift in meaning depending on who is telling the story. For this reason, the role of framing an adaptive reuse project is extremely important. Framing a project narrative may intersect with the work of determining or interpreting site significance.

As another example, language around the social, and social outcomes in particular, can indicate different attitudes towards social outcomes. For instance, the social or social outcomes might be affiliated with terms like "benefit," "public," "value," and so on. However, social outcomes can correlate with massive community change, both positive and negative, including displacement, rising rents, new populations, shifts in community pride, new businesses, increase or decrease of diversity, and many other indicators. The term "social outcomes" is open-ended, allowing for both positive and negative outcomes to be true. Through a review of the relevant literature, comparative practices, and in context of the interviews (as a dataset), the thesis seeks to distill perceptions and/or definitions of the social in the built environment. The fields of architecture and historic preservation tend to engage with positive social outcomes, as expressed in key terms that can be used to define social outcomes: justice, democracy, access (both to spaces and amenities), inclusivity, personal connection.

While the thesis is concerned with social outcomes, most of the interview questions do not directly use the phrase "social outcome," allowing participants to bring up social outcomes only as relevant. Interview questions sought to understand the existing dynamics of adaptive reuse from the architect's perspective. For instance, this question fits into the research theme: "What do you look for during initial site visits?" This question seeks to understand intention-setting and decision-making in a step-by-step process, using site- or building-related context. It gives clues to how the respondent thinks about historic buildings or sites and how the respondent prioritizes intentions and constraints. Ultimately, the interview questions return to the topic of social outcomes. The last question directly asks about social outcomes and the built environment: Are there any projects—whether yours or others—that could be examples of projects that had social inclusion as a goal?

24 Mason, "Fixing Historic Preservation: A Constructive Critique of 'Significance.'"

25 Alexander, "Hip-Hop and Housing: Revisiting Culture, Urban Space, Power, and Law," 828.

Conclusion

Interviews, alongside a review of the relevant literature and comparative practices, offer extremely valuable data for an initial inquiry into paradigms of architectural practices as it relates to the historic built environment. The transformative process of adaptive reuse brings together architectural and historic preservation practice, both of which claim various social benefits. In fact, the legal basis of historic preservation sets up an expectation of public benefit. However, there is limited scholarly data to support the social benefits claimed. There is particular need to better evaluate social outcomes of adaptive reuse because adaptive reuse accounts for almost half of architecture billings, and preservationists advocate for adaptive reuse as a successful strategy for saving historic sites. The thesis research focuses on the role of architects in adaptive reuse projects, aiming to reveal how architects evaluate project success, what (social) outcomes architects seek in adaptive reuse, and what—if any—obstacles and opportunities might impede or expand the architect's role in evaluating social outcomes of adaptive reuse. The research methodology, therefore, departs from the more common case study methodology, instead adopting a mixed methods methodology. The thesis addresses the professional practice of architecture, thinking longitudinally from project intention through post-occupancy and laterally across project types, locations, practices, etc. Therefore, this methodology is targeted at practitioners. Therefore, the primary limits of the research include limits to generalizability due to the small group of interviewees. With only eight interviewees, the interview data serves to offer insight into current practice and may offer paths of additional inquiry. The limited number of participants also means that the data could be easily skewed, and thus was not analyzed statistically. For instance, with many interviewees working in New York City, that particular regulatory preservation environment may influence interviewees' perceptions and practices of adaptive reuse. The municipal regulatory preservation body in New York City, called the New York City Landmarks Preservation Commission (LPC) grew from a powerful local law that gives this body particularly forceful regulatory power. Further limitations include those omitted from the research, such as practitioners in a wider variety of practices. The inclusion of institutional representatives (such as university architects or facilities managers) in the pool interviewees would have enriched the data, and would make for productive future research.

Chapter 2
Literature Review

The complexities [of POE] are too many to be encompassed by one kind of person or professional acting alone. What is needed is a new way to collect and use information to take into account many of the complex modern requirements of human life.[26]

In order to understand the current state of knowledge regarding social outcomes, it is necessary to first take a step back and analyze the range of research related to outcomes of the built environment writ large. This establishes a context in which to both situate the assessment of social outcomes, and explore connections to other evaluation research. Literature concerned with studying outcomes—termed post-occupancy evaluation (POE)—spans architecture, building science, historic preservation, facilities management, and other sectors. This literature is underpinned by the idea that more data related to building outcomes leads to better buildings and more informed design decision-making. The scholarly research and guidance documents on post-occupancy evaluation rest on a foundational conviction that post-occupancy evaluation is a worthwhile and beneficial pursuit. This literature review draws primarily from literature in the historic preservation and architecture fields. Post-occupancy evaluation research can be categorized by the aim of evaluation: building use (program), physical performance, project performance, and preservation performance.

Early post-occupancy studies of student dormitories at UC Berkeley and the University of Utah in 1967 preceded a formal development of post-occupancy evaluation,[27] which gained traction as an area of novel research in the 1970s championed by Wolfgang Preiser, Herbert McLaughlin, and Connel and Ostrander, with support from the AIA.[28] Governments in the UK, Canada, New Zealand, Australia, and the United States developed dedicated agencies for evaluating public works projects, government buildings, transportation facilities, and other public buildings.[29] The potential for post-occupancy evaluation to improve building outcomes motivated research on methodologies and methods for undertaking such evaluations, including at the National Academy of Sciences in the mid-1980s.[30] Case studies underlined the utility of post-occupancy evaluations for identifying best practices and problems.[31] Advocates push for wider study and adoption of post-occupancy evaluation. For instance, Preiser and Hardy argue that evaluation data ought to be taken as seriously as traditional, expert-driven architectural criticism, thereby democratizing the evaluation process through prioritizing user feedback.[32] Becker, too, advocates for POE as a strategy for achieving "valued outcomes."[33] At an organizational level, the American Institute of Architects (AIA) promotes use of post-occupancy evaluation through online and in-person educational offerings.[34] These educational, advocacy, and research efforts rest on and promote the utility of post-occupancy evaluation as process for creating better building outcomes, outlining a paradigm of evaluation and evidence-based design. The claim made in this thesis—that evaluating social outcomes of adaptive reuse is beneficial to practice—extends the argument made in POE literature and advocacy of the foundational importance of POE.

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26 Bechtel, Marans, and Michaelson, Methods in Environmental and Behavioral Research, 4.

27 Van de Ryn and Silverstien, Dorms at Berkeley: An Environmental Analysis; Hsia, Residence Hall Environments: An Architectural Psychology Case Study.

28 Preiser et al., "Introduction"; Preiser, Hardy, and Schramm, Building Performance Evaluation.

29 Preiser, Hardy, and Schramm, Building Performance Evaluation, 6.

30 Preiser, Hardy, and Schramm, 6.

31 Preiser and Hardy, "Historical Review of Building Performance Evaluation," 152.

32 Preiser and Hardy, "Historical Review of Building Performance Evaluation."

33 Becker, "Post-Occupancy Evaluation," 224.

34 "Designing for Discovery - AIA."

POE scholars debate the appropriate methodology for evaluating buildings. Francis and Marcus describe two levels of evaluation: one briefer and based on human needs that might be thought of as "an informed, journalistic critique"; while the second level necessitates systemic social science techniques and a longer time-frame.[35] Likewise, Becker proposes a "diagnostic" approach that is simpler, faster, less scientific, and more aligned with practice; as well as an "academic-based" approach would comprise a longer, more scientific, peer-reviewed study.[36] Both strategies offered rely heavily on in-person site observation, with informal interviews recommended for added depth of study.[37] The two methodologies present a tradeoff between time and rigor.

Scholarly research on POE has outlined its goals and methods as a feedback mechanism for evaluating design outcomes. Evidence-based design (EBD) and building performance evaluation (BPE) are similar practices that have evolved more recently out of POE. Neither is considered at length in this thesis. Evidence-based design is the process of utilizing existing data to optimize design for particular goals—essentially the process of incorporating outcomes data, be it from POE or other sources, into the design process.[38] Building performance evaluation (BPE) is considered a data-rich cousin to post-occupancy evaluation that evolved from and may includes POE. Both post-occupancy evaluation and building performance evaluation utilize a "form of systematic inquiry intended to discover and document how a building, product, or service has worked for its intended use."[39] However, BPE, as the name implies considers building performance—energy consumption, occupant satisfaction, and other performance metrics. The literature reviewed primarily concerns POE, but may touch on EBD or BPE as appropriate. Unlike BPE, the literature reveals that POE considers various purposes of evaluation. Four primary categories of post-occupancy evaluation literature are enumerated below and further explained in the chapter:

1. Post-Occupancy Evaluation of Building Use: Relationship between design and programmatic outcomes, such as hospital design and health outcomes or office design and worker productivity.
2. Post-Occupancy Evaluation of Physical Building Performance: Relationship between building design or construction and physical building outcomes, such as user comfort, maintenance, and sustainability.
3. Post-Occupancy Evaluation of Project Performance: Relationship between building design and project outcomes outside of program and building performance, such as economic stimulation, civic pride, or profit.
4. Post-Occupancy Evaluation of Historic Preservation Performance: Relationship between building design and historic preservation outcomes, such as the continued existence of the building, education, and revitalization.

Post-Occupancy Evaluation of Building Use

A subset of literature examines the relationship between design and programmatic outcomes. Building program significantly impacts the metrics used in post-occupancy evaluation and frames project outcomes according to program-specific metrics. Preiser et. al. has considered at length the application of post-occupancy evaluation to specific building types: healthcare, education, courthouses, offices, campuses, homeless shelters, multi-family residences, and many more.[40] The literature dealing with programmatic outcomes often crosses over into evidence-based design, specifically concerned with best practices in designing for such programs. There is much to be learned from assessing the amount of attention given to certain building types and the metrics used to evaluate them.

POE, BPE, and evidence-based design have become increasingly prevalent in the healthcare field, in which the practice of outcomes evaluation is required and critical to advancement. Research on hospital design in the 19th and early 20th centuries compared existing hospitals to one another in order to understand successes and failures of their designs relative to healthcare outcomes.[41] Architect and planner Richard Llewelyn Davies, with the University of Bristol and the Nuffield Provincial Hospitals Trust, produced a ground-breaking study in the UK of in-patient and out-patient areas, as well as hospital

35 Marcus and Francis, People Places: Design Guidelines for Urban Open Space, 346.
36 Becker, "Post-Occupancy Evaluation," 225.
37 Marcus and Francis, People Places: Design Guidelines for Urban Open Space, 346–56.
38 Preiser, Hardy, and Schramm, Building Performance Evaluation.
39 Becker, "Post-Occupancy Evaluation."
40 Preiser et al., "Introduction"; Hamilton, Evidence-Based Design for Multiple Building Types.
41 Stevens, Casey, and Williams, Modern Hospitals; Nuffield Provincial Hospitals Trust, "Studies in the Functions and Design of Hospitals."

staff organization (Fig. 2). He found a connection between physical design—including daylight, artificial light, color, sound, ventilation, and ward organization—and certain health outcomes.[42] Years later, research on hospital design continues, but has expanded to include community engagement and patient experience.[43] Such a perspective informs the work of organizations like MASS Design Group today, operating based on evidence that the same design consideration Llewelyn Davis studied impact health outcomes. Post-occupancy practice at MASS borrows from non-profit practice where donors expect outcomes and impacts to be reported annually according to mission-specific goals.[44]

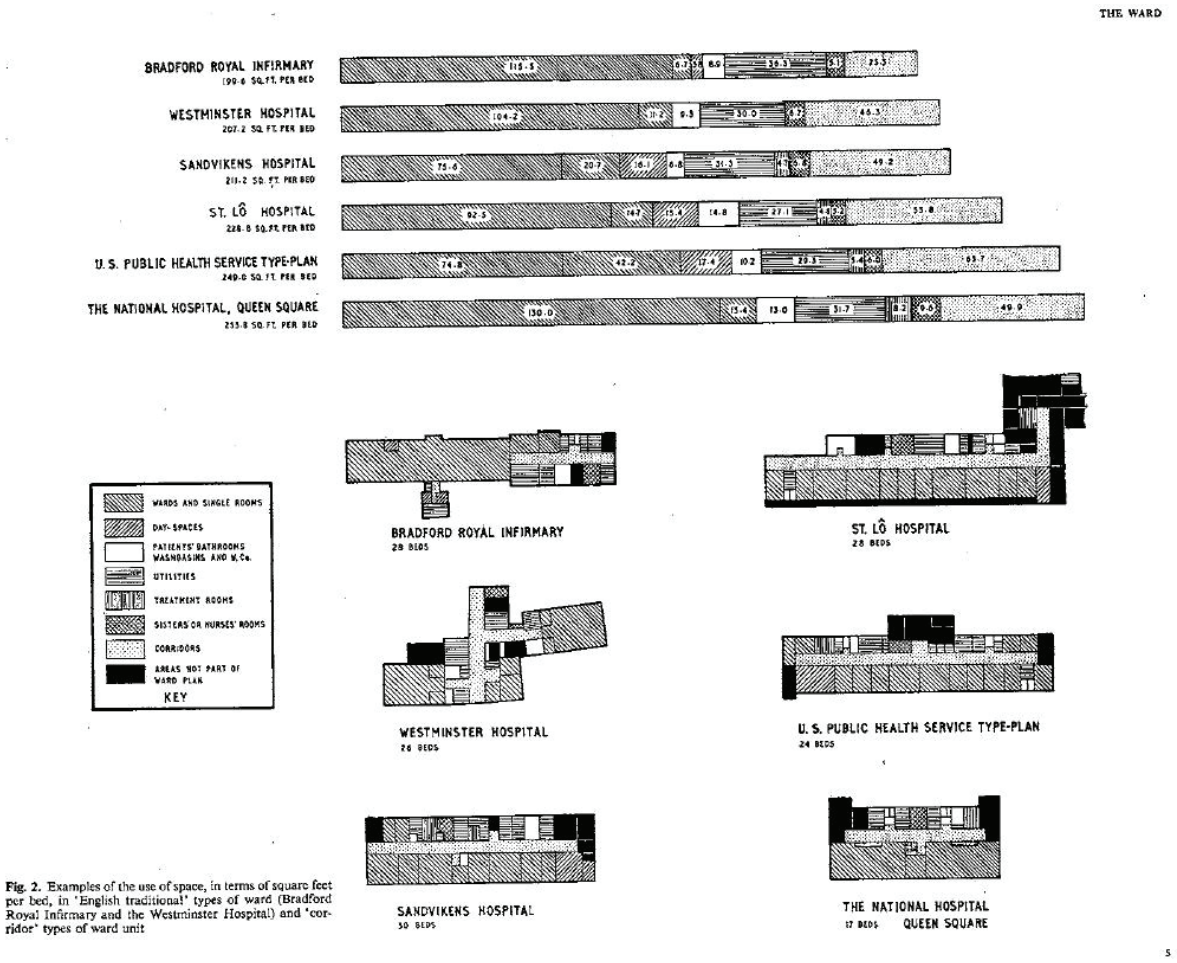


Fig. 2. Analysis of hospital wards. Accessed from: Richard Llewelyn Davies. "Function and design of hospitals," 1955.

Post-occupancy evaluation has also been deployed extensively in educational projects, such as libraries and schools, with metrics of evaluation related to learning outcomes, student safety, and cost-effectiveness.[45] Academic researchers, government, and professional organizations, as well as non-profit advocacy groups, have made contributions to this research. To cite MASS Design Group again, the firm partnered with the M2 Foundation to study learning and social outcomes associated with school design.[46] Both the non-profit and the firm will base future school design across Rwanda on the POE results. Much school research ends up in "best practices" documents, informing evidence-based design for future educational buildings.[47] In library post-occupancy evaluation, mission-focused metrics inform post-occupancy evaluation. The International Federation of Library Associations and Institutions developed a set of best practice guidelines for achieving qualitative goals

42 Nuffield Provincial Hospitals Trust, "Studies in the Functions and Design of Hospitals."
43 Keniger, "Hospital and Health Design, at Once Individual and Collective."
44 "How MASS Design Group's Approach to Data Could Save the Architectural Profession."
45 "A Survey Study of Elementary Classroom Seating Designs. | National Clearinghouse for Educational Facilities."
46 "True Value."
47 "Home | National Clearinghouse for Educational Facilities"; "A Survey Study of Elementary Classroom Seating Designs. | National Clearinghouse for Educational Facilities."

of new libraries.[48] The research is based on collective librarian surveys, in partnership with architects, and intended to help librarians achieve desired outcomes, such as empowering library users.[49]

The housing sector, particularly institutional and public housing, provided fodder for the earliest POE studies in the United States. Two ground-breaking studies assessed student dormitories: one conducted by Van der Ryn and Silverstein out of UC Berkeley, and another by Hsia in Utah, both in 1967.[50] Other early post-occupancy evaluation studies included reports on dormitories published by the AIA and government-commissioned studies of public housing for adults with disabilities.[51] A seminal study of the first facility designed specifically for and inhabited by older adults, in Victoria Plaza Revisited (1994), focuses on environment-behavior outcomes—the way the new environment affected health and psychological well-being in older adult residents. This study, conducted by Berkeley psychology professor Frances M. Carp, declares the value of learning from existing buildings and past projects.[52]

While housing post-occupancy evaluation considers user needs and well-being, particularly in government or institutional housing, post-occupancy evaluation of offices primarily considers user comfort in both private sector and government office settings as means for understanding and impacting worker productivity.[53] In the case of federal office buildings, POE is used to efficiently distribute capital expenditures for maximum impact and to align building outcomes with government policies. However, in the private sector POE, is used to increase productivity and achieve mission-specific company goals, including desired cultural or social outcomes.[54]

The literature on post-occupancy evaluation of specific building types is expansive, covering retail, laboratory, theaters, parks, a wide variety of housing types, urban spaces and many other program types. Assessment of program-related or functional success link facilities to organizational mission, as seen in healthcare spaces, housing, educational facilities, and offices. The strong connection between program and metrics of evaluations indicates the particular importance of intention in measuring outcomes.

Building performance

The category of building performance evaluation has to do with the physical aspects of the building: the structure, assemblies, energy consumption, thermal comfort, material durability, and so on. These technical, physical aspects of building performance are of great interest to both academic literature and architectural practices, which may have in-house research teams seeking to capitalize on the growing interest in building performance to offer building performance data to clients.

User comfort was an early focus of post-occupancy evaluation, often carried out with paper surveys or in-person interviews. Even in the early years of post-occupancy evaluation researchers took issue with the lax data collection methods and narrowness of user satisfaction data.[55] Recently, architecture firms have leveraged technology to better capture user comfort. KieranTimberlake, for instance, developed an app and custom sensors for tracking temperature, light, humidity, noise, and draftiness (Fig. 3).[56]

User comfort is closely tied to sustainability, leveraging close monitoring of comfort to avoid over-designing heating or cooling systems. While sustainable design is a rapidly growing area of practice and research, post-occupancy frameworks

48 Latimer and Sommer, Post-Occupancy Evaluation of Library Buildings.
49 Latimer and Sommer, 169:2.
50 Van de Ryn and Silverstien, Dorms at Berkeley: An Environmental Analysis. Hsia, Residence Hall Environments: An Architectural Psychology Case Study.
51 Connell and Ostrander, An Evaluation of Housing for the Severely Disabled in the Context of a Service Delivery System; Connell and Ostrander, Methodological Consideration in Post-Occupancy Evaluation: An Appraisal of the State of the Art.
52 Carp, Victoria Plaza Revisited, 3; Anderzhon, Fraley, and Green, Design for Aging Post-Occupancy Evaluations. Other authors who have worked on post-occupancy study of elderly housing and best practices: Altman, Lawton & Wohlwill, 1984; Carstens, 1985; Newcomer, Lawton & Byerts, 1986; Carp, 1987; Regnier & Pynoos, 1987; Blank, 1988; Cohen & Weisman, 1991; Heumann & Boldy, 1993.
53 Federal Facilities Council, Learning from Our Buildings; Brill, Using Office Design to Increase Productivity; Meir et al., "A Window of One's Own."
54 Brill, Using Office Design to Increase Productivity; Meir et al., "A Window of One's Own."
55 Becker, "Post-Occupancy Evaluation," 224; Parshall, Evaluating Facilities.
56 "Roast - Workplace Comfort Science."

for capturing sustainability data are more limited. Sustainability is ripe for increased post-occupancy evaluation and building performance evaluation, with the ability to feed outcomes data back into energy models, for instance.[57] Government and academic researchers have sought clarity on the usefulness of sustainable design through outcomes evaluation.[58] The General Services Administration Office of Federal High Performance Green Buildings, for instance, developed a robust program in pursuit of reducing the environmental impact of existing and new federal facilities. The program focuses on operational and energy efficiencies—capitalizing on confluences of the two related goals.[59] The AIA has also declared the importance of post-occupancy evaluation to sustainability through its Committee on the Environment (COTE) Top Ten awards, which are given to projects with demonstrated reduction of environmental impact and post-occupancy lessons.

POE and BPE also offer efficiencies and insights in the construction phase and, along with evidence-based design, provide valuable information in maintenance planning. Construction best practices and efficiencies play in to long-term building performance, as well as time and budget goals.[60] Construction, maintenance, user comfort, and sustainability evaluations are all able to use building data, physical observation, quantifiable metrics, and user feedback data to measure outcomes. The metrics endemic to many building performance questions make this category of POE more readily quantifiable and generalizable.

Fig. 3. Analysis of user comfort survey data collected through Roast. Accessed from: https://roastsurvey.com/product/

Project Performance

The category of project performance deals with the metrics established at the outset of a project that are not captured in program or building performance, and thus may extend beyond the physical building. These types of project goals typically include financial returns on investment (ROI), but can also include economic, social, environmental, or other outcomes.

Profit as a project goal and profitability as a measure of success falls somewhat outside the architecture and preservation literature. However, a multitude of scholarly and grey literature offer evaluations strategies and evidence-based best practices in understanding the profitability of development projects, including adaptive reuse projects.[61]

Social project goals consider the role a project has in society. There may be collective impacts, such as social gathering or increased social connections between people, or individual impacts with social implications, such as feelings of personal

57 Architect #7, in conversation with the author; Preiser, Hardy, and Schramm, Building Performance Evaluation.
58 GSA Public Buildings Service, "Assessing Green Buildilng Performance: A Post-Occupancy Evaluation of 12 GSA Buildings"; Conejos, Langston, and Smith, "Enhancing Sustainability Through Designing for Adaptive Reuse at the Outset."
59 St. Germain, "Planning an Energy Assessment for Federal Facilities."
60 Bordass and Leaman, "Building Performance Evaluation in the UK: So Many False Dawns."
61 Tan, Shuai, and Wang, "Critical Success Factors (CSFs) for the Adaptive Reuse of Industrial Buildings in Hong Kong"; Burchell, The Adaptive Reuse Handbook.

connection to place. Personal connection to place, for instance, has been studied within environment-behavior study, in which, distinct from physical user comfort, researchers examine the psychological or emotional response of users to their environment. Environment-behavior research considers reactions to environments broadly "across" people, as well as reactions "within" people.[62] Environment-behavior research is an outgrowth of psychology, so standardized psychological tests are employed to research psychological responses to environments. For instance, Nassar proposes a methodology for assessing users' emotional responses to images of a building—a sort of emotional user comfort assessment.[63] Preiser incorporated user perception of environment in his Habitability Framework for POE, an evolution from the concepts put forth in environment-behavior study.[64]

Social project goals are often intrinsic to public space projects, designers of which may establish goals such as creating inclusive, engaging, healthful, democratic, and accessible public places. Post-occupancy evaluation of public spaces (plazas, parks, etc.) focuses on easily quantifiable metrics such as occupancy data and assesses qualitative user experience using observation and surveys or interviews.[65] A thorough study of public space outcomes study can be found in Chapter 3: Comparative Practices in Allied Fields.

Preservation Performance

Literature explicitly concerned with outcomes of historic preservation primarily examines economic outcomes, while some literature addresses sustainability and quality of life.

Numerous academic and advocacy papers have considered the economic value of historic preservation, in terms of market value, social capital value, and cultural capital value, among others.[66] The enormous carrot of the Federal Historic Tax Credit, which incentivizes private investment in preservation, has produced additional economic and urban revitalization impacts. The importance of this tax incentive to preservation practice has resulted in a significant number of studies on the economic impacts of historic preservation.[67] Outcomes research captures economic impacts of everything from small, individual historic preservation projects to urban-scale revitalization projects.[68] Much of this past and ongoing literature on economic outcomes of historic preservation falls into what might be termed an advocacy position, particularly work carried out by or in conjunction with non-profit advocacy organizations.[69] For instance, the Landmarks Conservancy, a New York City preservation organization, commissioned a report from PlaceEconomics in 2016 showcasing the job creation, density, investment, sustainability, and tourism correlating with historic districts in New York City.[70] The National Trust for Historic Preservation, which continuously advocates for and defends the Federal Rehabilitation Tax Credit, publishes an annual assessment of the economic impact of the Federal Rehabilitation Tax Credit.[71]

However, as Mason points out, the economic outcomes argument for historic preservation can only carry the field so far. Economic valuation as seen in typical economic indicators (property values, taxes, jobs data) does not offer a complete understanding of the historic preservation outcomes.[72] O'Brien, for instance, pinpoints indirect economic indicators such as

62 Bechtel, Marans, and Michaelson, Methods in Environmental and Behavioral Research, 92.

63 Nassar, "Using Scientific Research Methods in Assessing Visual Aesthetic Quality"; Preiser et al., "Introduction."

64 Preiser et al., "Introduction"; Preiser, "The Habitability Framework."

65 Ying and Wang, "The Case Study on Application of Post Occupancy Evaluation on Parks of Residential District"; Taplin, Scheld, and Low, "Rapid Ethnographic Assessment in Urban Parks"; Gehl Architects, "How to Use the Public Life Tools"; Deng and Bao, "The Post Occupancy Evaluation of the People's Park, Guangzhou."

66 Mason, "Economics and Historic Preservation: A Guide and Review of the Literature."

67 Joint Committee on Taxation, General explanation of the Tax Reform Act of 1986; Joint Committee on Taxation, General Explanation of the Economic Recovery Tax Act of 1981; Ryberg-Webster, "Urban Policy in Disguise: A History of the Federal Historic Rehabilitation Tax Credit"; National Park Service, "Historic Preservation Tax Incentives."

68 Rypkema, Cheong, and Mason, "Measuring Economic Impacts of Historic Preservation: A Report to the Advisory Council on Historic Preservation"; Mason, "Economics and Historic Preservation: A Guide and Review of the Literature"; Mason and de la Torre, "Economics and Heritage Conservation"; Listokin, Lahr, and Heydt, "Third Annual Report on the Economic Impact of the Federal Historic Tax Credit."

69 "Case Studies."

70 PlaceEconomics, "Historic Preservation: At the Core of a Dynamic New York City."

71 Listokin, Lahr, and Heydt, "Third Annual Report on the Economic Impact of the Federal Historic Tax Credit."

72 Mason, "Be Interested and Beware: Joining Economic Valuation and Heritage Conservation"; Mason, "Fixing Historic Preservation: A Constructive Critique of 'Significance'"; Mason and de la Torre, "Economics and Heritage Conservation."

sense of place, quality of life, attraction of businesses and residents, community cohesion, and education, noting a possible connection to cultural and social outcomes.[73] The work of re-routing the conversation from economic to other outcomes may involve leveraging existing indirect economic indicators, as O'Brien does, including new businesses and individuals moving to a historic area, sense of community, and social capital.[74] The National Trust Research & Policy Lab investigates physical characteristics of historic districts: scale of buildings, typologies, architectural characteristics. Such research draws connections between the physical qualities of historic areas to higher percentage of minority- and women-owned businesses, more diverse populations, and better access to public transit.[75] However, research based in New York City shows perhaps an opposing set of data about increasing property values due to designation, resulting in homogenous populations in these historic areas.[76] In both cases, economic data attempts to approximate socio-cultural outcomes.

In sustainability outcomes of historic buildings, historic preservation outcomes intersect with building performance evaluation. As sustainability becomes not only a desired outcome, but a requirement, the popular adage that "the greenest building is the building that already exists" becomes an even more highly problematic concept. Sufficient data does not exist to support this argument. Sustainability outcomes for historic buildings often focus on the reduction of environmental impact through qualities specific to existing buildings, such as embodied energy, passive heating and cooling systems from a time before mechanized temperature control, and energy related to transportation to and from a building.[77] Conejos, Langston, and Smith have even proposed that architects consider qualities of new buildings that will increase the likelihood of building reuse, thus extending the building's lifecycle.[78] Sustainability outcomes for historic buildings remain woefully under-researched, leaving assumptions unchecked and solutions un-proposed.

Conclusions

The scholarly research and guidance documents included in this literature review provide an overview of current scholarship and recommendations for post-occupancy evaluation. The range of possibilities for evaluation are vast, ranging from any number of program-specific evaluations, to energy use, user comfort, psychological impact, financial ROI, and to economic outcomes in historic buildings. However, the literature ignores many other topics, and superficially engages with these and many others. Social outcomes are notably absent from post-occupancy evaluation literature. Except for a few voices in preservation calling for holistic assessment of preservation outcomes, social outcomes are tangential to the body of literature.

Post-occupancy evaluation literature reveals the importance of specificity and intention to evaluation—in developing metrics and assessing outcomes. Program-specific evaluation, for instance, considers the intended outcomes of the space for the intended users. The metrics are tied to program and are highly specific, such as quality of library visitor experience, specific kinds of health outcomes, or work productivity in specific kinds of office environments. Metrics related to the intended user are paramount, while neglecting building non-users who may still be impacted by the building or site. One exception may be some hospitals, who have made concerted efforts to consider a more expansive scope of outcomes evaluation in studying community impact. The program-specific metrics, or other targeted metrics described in the literature, also point to the tendency of POE to approach evaluation with a case study mindset.

Building performance, profit outcomes, and economic outcomes of preservation all rely on quantitative data. One of the greatest obstacles in post-occupancy evaluation generally is a lack of clear metrics, meaning: an understanding of what metrics would be most useful to achieving evaluation goals. This results in an over-reliance on easily quantifiable data, a phenomenon that preservation literature has seemed to grapple with more fully than post-occupancy scholarship in general.

The value practitioners and researchers place on POE supports the claim of this thesis that POE is a valuable tool for

73 Pierce O'Brien, 19.

74 Pierce O'Brien, "Measuring the Full Economic Impacts of Local Historic District Designations"; Mason, "Be Interested and Beware: Joining Economic Valuation and Heritage Conservation."

75 National Trust for Historic Preservation, "Older, Smaller, Better: Measuring How the Character of Buildings and Blocks Influences Urban Vitality."

76 Been et al., "Preserving History or Hindering Growth?"; Ellen, McCabe, and Stern, "Fifty Years of Historic Preservation in New York City."

77 National Trust for Historic Preservation, "The Greenest Building: Quantifying the Environmental Value of Building Reuse"; McCaig, Pender, and Pickles, "Energy Efficiency and Historic Buildings: How to Improve Energy Efficency."

78 Conejos, Langston, and Smith, "Enhancing Sustainability Through Designing for Adaptive Reuse at the Outset."

better understanding outcomes of the built environment. Both preservation and architecture literature concerned with post-occupancy evaluation and outcomes share an understanding of the utility of post-occupancy data. The National Trust for Historic Preservation, for instance, speaks about "measurably demonstrating the benefits of historic preservation."[79] However, the scholarly and advocacy focus on economic outcomes leaves gaps in existing research. Furthermore, much of the literature regarding preservation outcomes comes from advocacy organizations, such as the National Trust for Historic Preservation, PlaceEconomics, and Preservation League NY. The role of advocacy organizations in conducting research is problematic because it seeks to justify the status quo. The outcomes of their research support the organization's survival.

Post-occupancy evaluation literature considers specific metrics of success established through project intention—be it program, sustainability, economic, or many others. Governments, institutions, architects, academics, private clients, and non-profit organizations are all involved in different kinds of post-occupancy evaluation. The relative absence of explicitly social outcomes research, compared with the variety of studies on programmatic, sustainability, user comfort, economic, and environment-behavior outcomes, points to a potential lack of intentionality to consider social outcomes. While the POE literature emphasizes case study methodology, the following chapters will take on a different methodology, focusing instead on architectural practice. Metrics, actors, intentions, obstacles, and rationale for carrying out post-occupancy evaluation gleaned in this set of literature frames findings captured in analysis of specific practices and architect interviews in the subsequent chapters.

79 "National Trust Values in Action."

Chapter 3

Comparative Practices in Allied Fields

"I think [social outcomes are] not directly measurable with the tools that we have control of, or typically engage. That might be different if we had a different kind of practice or if we regularly worked on, say, housing or social infrastructural projects that had a community engagement component as a critical component of the project."[80]

Post-occupancy evaluation (POE) literature covers a wide array of evaluation goals, metrics, and methods. However, as discussed in Chapter 2, POE literature omits evaluation of social outcomes generally, and social outcomes of adaptive reuse, specifically. Nevertheless, select practices do consider social outcomes through qualitative methods. These practices do not necessarily concern adaptive reuse, but offer insights into how select practices currently consider social outcomes. The process of social outcomes evaluation starts at the beginning of the project for the practices considered. The process of establishing a baseline and thoroughly understanding the social context is fundamental to their work. This pre-design work establishes a social context for the practitioner, which informs project goals and metrics of success. In the post-occupancy phase, practitioners use qualitative methods to evaluate project outcomes based on the project goals. In both the pre-design and post-occupancy phases, these practices draw on methods and methodologies from public history, historic preservation, ethnography, urban planning, economic and community development, sociology, and non-profit humanitarian models. The common thread is a profound respect for people, expressed through processes that necessitate, activate, and otherwise deeply value stakeholder participation. The practice of values-based assessment offers a framework and set of tools for gaining insight into past and existing social context, particularly valuable to this thesis for its connection to the historic built environment. Socially-committed architectural practices have developed a variety of strategies for assessing social context, establishing outcomes metrics, and employing various methods for assessing outcomes. Gehl Architects and MASS Design Group, in particular, offer helpful comparative practices for establishing methods and metrics for social outcomes. The literature employed in this chapter includes preservation literature, guidance documents from practitioners, a key interview with a Gehl employee, and post-occupancy evaluation literature concerned with strategies for collecting qualitative post-occupancy outcomes. The first section of the chapter examines strategies for gaining insight into social context and establishing metrics in a variety of project types. The second section examines methodologies employed for collecting qualitative post-occupancy outcomes data.

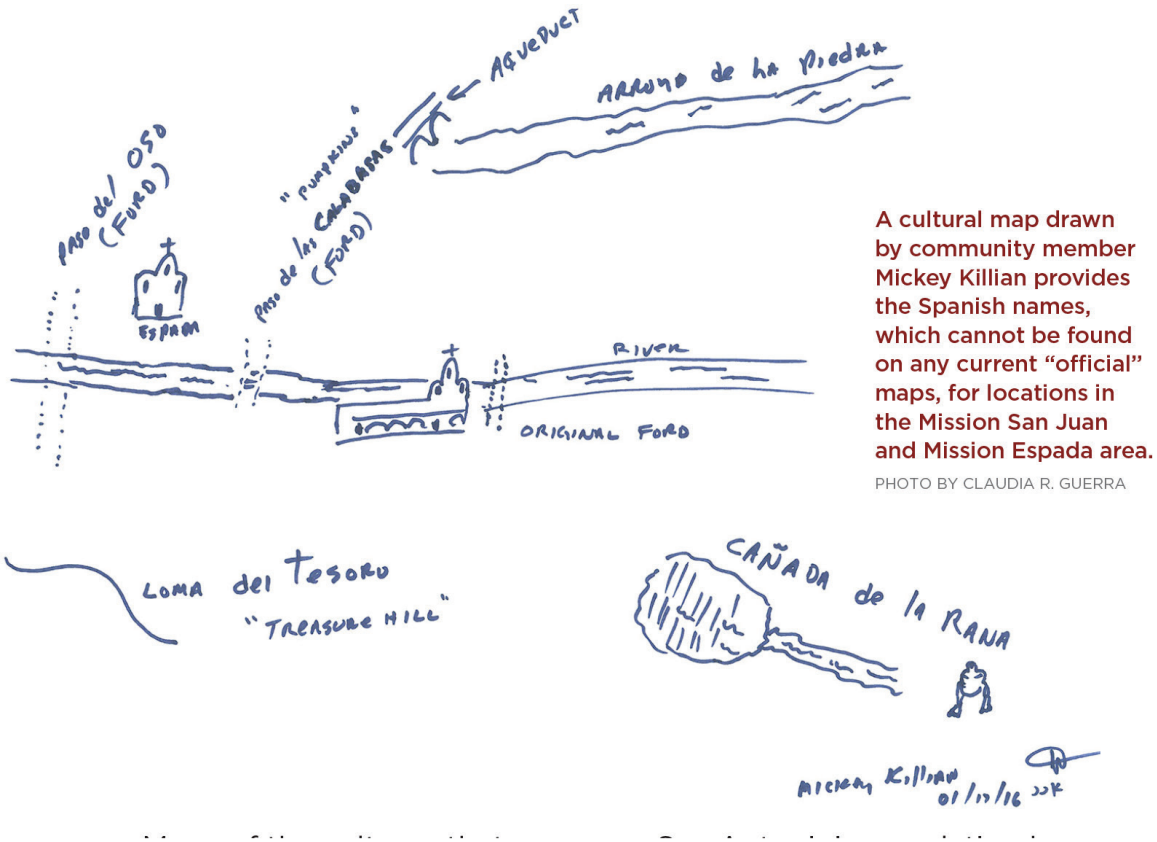
Social Context and Establishing Metrics

Select practitioners in historic preservation and urban planning have fostered particular expertise in pre-design phase social context evaluation. Some historic preservationists, for instance, have branched out from traditional methods of assessing the value of historic buildings through architectural and historical analysis—reliant on historic documents, images, and building condition. Instead, the theory of values-based assessment recognizes that people ascribe value to heritage. Consequently, adopters of the values-based theory of preservation argue that processes for analyzing the value of heritage, much like heritage itself, ought to be shared.[81] Tools for discerning how people ascribe value in the historic built environment can include community hearings and meetings, cultural mapping, interviews, audio-visual tools, and installations. These

80 Architect #4, in conversation with the author.

81 Guerra, "Cultural Mapping," 29–30.

methods establish baseline social context, and can help inform cultural heritage management, establish metrics for project success, and serve a variety of other project goals. Values-based assessment strategies employed in historic preservation offer precedents for soliciting other types of significance that originate in non-expert contexts and eschew traditional significance[82] as defined by policy. As Marcus and Francis write, "Research-based recommendations cannot substitute for public participation."[83]



A cultural map drawn by community member Mickey Killian provides the Spanish names, which cannot be found on any current "official" maps, for locations in the Mission San Juan and Mission Espada area.

PHOTO BY CLAUDIA R. GUERRA

Figure *4 Product of cultural mapping, organized by San Antonio Office of Historic Preservation. Accessed from: Guerra, "Cultural Mapping."*

Oral histories fill in the personal experiences that may not be recorded in the traditional body of literature, serving as a key resource for (public) historians. The San Antonio Office of Historic Preservation, for instance, has invested in getting to know the historic and current social context of the city of San Antonio, TX through recording conversations with residents. Conversations with the mostly Latinx population in San Antonio draw from an existing cultural practice called the testimonio—a storytelling practice popular in Latin America.[84] The preservationists pair the recorded conversations with cultural mapping, which asks participants to draw an image or map to situate the testimonio geographically (Fig 4). The preservation office combines the participant maps into one large map, which can then be used for planning with sensitivity to community values and shared through public exhibitions.[85]

Recording with audio, as well as video, also supports social context analysis in Der Linde and Mans's project in St. Christopher (St Kitts), West Indies. The academic project examines how a values-based approach to heritage conservation can inform a heritage management strategy. The researchers tackle the question of "how to include, capture, and assess the contested and multivocal nature of heritage."[86] In this case, the values-based approach to heritage identification and conservation strategy at the beginning of the project sets up a metric by which the project outcomes can be measured. The

82 As explained in Chapter 1, significance offers the rationale for designation and summaries the value of the property.
83 Marcus and Francis, People Places: Design Guidelines for Urban Open Space, 9.
84 Guerra, "Cultural Mapping," 31.
85 Guerra, 32.
86 van der Linde and Mans, "Visualising Values in the Caribbean: A Creative Approach to Value Assessment," 259.

researchers asked targeted questions in interviews with community members, intended to elicit data about what value an established heritage site has to them, and by extension, how it fits into their social context.[87] The questions asked in interviews were:

1. What do you know about the history of the site?
2. Do you feel personally connected to the site?
3. Is this site important to you?
4. What do you think should happen to the site in the future?

The research found that an audio-visual format helped interviewees feel "more engaged and heard" and captured the emotional, intangible, and experiential aspects of heritage sites.[88]. Asking people about the values they ascribed to the site and what they think should happen to the site sets up public participation in heritage management. As in the San Antonio mapping project, the recorded conversation is a valuable documentation tool for practitioners to better understand the past and current social and cultural context of a site.

The related fields of archaeology and anthropology also consider past and current social context, and the tools used in those fields have been applied in limited ways at heritage sites. Ethnographic methods, for instance, provide tools for studying cultural phenomena. Taplin, et. al. employed a Rapid Ethnographic Assessment Procedure (REAP)—U.S. National Park Service's adaptation of traditional ethnographic methods—in assessing the cultural and social context at Independence Hall in Philadelphia. REAP draws from "action anthropology," which is "a value-explicit approach that works to achieve self-determination and to foster the accumulation of power in local communities."[89] The researchers established stakeholder groups, then conducted semi-structured interviews, transect walks, focus groups, and behavior mapping to collect data from each cultural group.[90] Each of these methods allowed researchers to collect direct and indirect data about the social and cultural value of the site to stakeholder groups. The resulting data informed park management decisions and offered baseline data and metrics for assessing social outcomes of the heritage management decisions.

The previous examples draw from preservation practice, dealing explicitly and intentionally with historic sites and the values people ascribe to these sites. While these practices do not develop clear social outcomes metrics, there is an implication that the heritage management strategy employed will or ought to preserve the social values, alongside the physical historic fabric. On the other hand, certain design practices, while not necessarily working with historic sites, also explicitly consider social outcomes of their work in order to establish clear project goals and outcomes metrics. The firms emphasize the importance of studying social context in the pre-design phase in order to establish baseline data and metrics of success at the outset of a project, which in turn support post-occupancy data collection. The firms employ a variety of methods for studying social context, developing metrics of success, and establishing baseline data, including leveraging existing data collected by others, site observation, stakeholder engagement, strategic planning with the client group, and testing viability.

The fields of urban planning and urban design have given rise to practices that specialize in public space design. Public space designers examine the current social function[91] of a site or space through existing data, observational tools, and surveys. Existing data, such as census and traffic data, offers an initial understanding of the site. However, Gehl, for instance, looks at the existing data critically and asks additional questions to fill in the gaps. Often, the missing data is about "public life and the social life of a space: how is it being used? By who? How do those patterns change by day, week, season? What do people love about a space?" And [we] try to get some data there that we can layer in with what's already been collected."[92] Observational tools, interviews, surveys, and other site-based data collection can all serve to provide this "missing data."[93]

87 van der Linde and Mans, 260.
88 van der Linde and Mans, 266.
89 Taplin, Scheld, and Low, "Rapid Ethnographic Assessment in Urban Parks," 81.
90 Taplin, Scheld, and Low, 86.
91 As distinct from the social value of a site.
92 Interviewee #8, in conversation with the author.
93 Interviewee #8.

Public space design literature—primarily reports of academic endeavors—proposes similar methods: in-person site observation and collecting user data—either through informal interviews or surveys.[94] These tools have evolved with technology. Now, cities and public space designers can collect occupancy data through cell phones and smart technology rather than (or in addition to) people in the field with clipboards. The New York City Parks Department, for instance, is piloting smart benches that track how many Wi-Fi-enabled devices are within range of the sensor (but does not collect any user data), in order to better distribute Parks Department resources.[95] Sensors in public spaces can track movement of people and vehicles, while social network data may give insights into who is using a space and why.[96]

In addition to establishing baseline metrics, data collection at the outset of a project can inform metrics of success for project outcomes. Practices committed to social outcomes, like Gehl and MASS Design Group, emphasize a robust pre-design visioning processes. Gehl collects baseline data and establishes metrics of success based on the client's desired outcomes, which have included studying the relationship between public place design and social mixing, design and certain health outcomes, and what makes a great public place in a particular city.[97] While there are similarities between projects, the metrics are project-specific so they respond to the goals the project team has set. One example concerns a public park in Lexington, KY (Fig. 5). The city of Lexington was interested in diversity and social connection, so "the framework for measuring was set based on what they wanted to learn."[98] After an initial survey, Gehl worked with the City of Lexington to install a temporary summer water play area, with the goal of asking if this installation could "[catalyze] social mixing between disparate groups."[99] On-site observation and other evaluation tools confirmed that, yes, water-play at this site could and did catalyze social mixing. As one can see in this example, Gehl integrates an intention to collect post-occupancy evaluation data at the beginning of the project. The metrics of success come from project goals, which in turn grow out of a process of establishing desired outcomes and working with the client to set clear project intentions.

Likewise, MASS Design Group integrates post-occupancy outcomes planning into the early planning stages. MASS Design Group describes a 5-step process that encompasses an evaluation of existing social context at the project outset, establishes metrics of success, and then tests for both short- and long-term outcomes in the post-occupancy phase.[100] The metrics of success come out of their "Visioning" process, which—like Gehl's process—emphasizes partnerships and establishing clear project goals with partners and stakeholders. Gehl strategies for identifying project goals and metrics of success include: identifying stakeholders, understanding context and site, and re-focusing the conversation on big-picture questions.

94 Marcus and Francis, People Places: Design Guidelines for Urban Open Space, 346–56; Gehl Architects, "How to Use the Public Life Tools."

95 "Smart Benches : NYC Parks."

96 Khalid, "Sidewalk Labs' Controversial Data Collection Project Is Now a Company."

97 Gehl Architects, "How to Use the Public Life Tools."

98 Interviewee #8, in conversation with the author.

99 "SplashJam, Lexington, USA."

100 "Purpose Built: Designing for Impact," 4.

Figure *5 Image of Gehl Architect's SplashJam installation in Lexington, KY. Accessed from: Schuff, "Designing the Human City." Medium, Oct 19, 2018.*

Partnerships with clients and stakeholders play a critical role in both Gehl and MASS processes for developing metrics of success and evaluation. Previously-mentioned preservation strategies for assessing social context and values—such as those public history, preservation, anthropology-based practices—also value partners and stakeholders. "Stakeholder" may be defined differently based on the project, but in the public space projects, "stakeholders" could include "invested partners or public engagement" and should extend from the most engaged people attending meetings as well as the "everyday passerby, who walks or spends time in the space."[101]

After identification, Gehl and MASS engage stakeholders as early as possible and approach stakeholder engagement creatively for maximum reach. For Gehl, such engagement may include temporary installations or pilot projects to which stakeholders can respond (such as the SplashJam). The temporary projects can offer preliminary outcomes data, used to refine long-term project proposals, before making the full capital investment in construction.[102] These strategies for eliciting public feedback also share similarities to strategies employed in the preservation-based practices mentioned earlier in the chapter. The fundamental goal shared in each of these practices is to reach non-expert community members and learn from them to further a more inclusive and representative project outcome.

These socially-committed practices may develop sustained relationships with project partners in addition to broader stakeholder engagement, or as a proxy for broad public engagement. In conversations with partners, these socially-committed practices emphasize clarity in distilling the project goals. This may involve a close reading of organizational mission, or consensus-building among diverse organizations.[103] Gehl talks about re-focusing the conversation to public life goals, asking of partners and clients: "What is the life that you want to create here?" The fallback criteria for success, related to economic impacts and increasing activity in a place, certainly enter into the conversation; however, Gehl unpacks those aspirations by asking lofty, but simple questions of stakeholders and clients.[104] The process of discussing and refining project goals should produce clearer, more specific project goals and metrics of success. For instance, if the client wants a bike lane, and the project goals include engaging more "gender and age diversity," the design of the bike lane might shift from a painted area to a

101 Interviewee #8, in conversation with the author.
102 Interviewee #8.
103 "Purpose Built: Designing for Impact."
104 Interviewee #8, in conversation with the author.

more protected lane.[105] The emergent metrics of success often consider intended site users, the role of a place within various communities, and the personal connection between site users, site non-users, and place.

There are existing practices across related fields of historic preservation, urban planning, urban design, and architecture that begin a project with thorough research on the existing social context. A strong understanding of social context establishes baseline data (for tracking future change), intervention strategies, project goals, and metrics of success. Across the practices considered, all have developed processes based in robust stakeholder participation and strong relationships with partners. The stakeholder, in these practices, is critical to understanding baseline data, project goals, and metrics of success, which in turn are critical to evaluating social outcomes after the conclusion of the project.

Post-Occupancy Evaluation Methods and Methodologies

While practitioners establish baseline data and metrics of success at the beginning of the project, post-occupancy evaluation after project completion can then establish if the project has met established metrics of success. However, the how of post-occupancy evaluation and building performance evaluation is a significant challenge, particularly when it comes to social outcomes. Methods have become more sophisticated over time, evolving from paper surveys of "users' self-reported satisfaction" to constantly advancing technological tools.[106] However, as discussed in Chapter 2, POE tends to favor easily quantifiable data. Occupancy data, while easily quantifiable, is of interest to socially-engaged practices. Some of the same tools used in baseline data collection, like the smart NYC Parks Department benches, operate in a post-occupancy setting as, well. The smart benches essentially convey occupancy data (what time of day, day of the week, or season the benches are used, and for how long), with the goal of offering feedback about how people use parks and guiding how the Parks Department makes improvements. Sidewalk Lab is another example of this kind of feedback loop. Technology-driven data collection used in Sidewalk Labs data collection offers the ability to continually re-evaluate spaces based on a variety of post-occupancy data.[107] The timescale of post-occupancy evaluation (how long after project completion, repeated with what frequency, etc.), as well as the methods for post-occupancy evaluation, vary across practices.

Occupancy data and technology-driven data collection provide certain insights, but as discussed in Chapter 2, measuring qualitative outcomes presents challenges. Both quantitative and qualitative post-occupancy evaluation considers the relationship between stated project goals, baseline data, and outcomes. Specific POE questions might relate to changes since occupancy and issues for users.[108] Practitioners employ a variety of methods for measuring qualitative outcomes. Shibley and Schneekloth advocate for conversation-based methods of qualitative POE. The researchers propose relating outcomes to project and mission-based goals. The authors propose evaluation based on a structured dialogue—essentially a semi-structured interview—that follows the following steps:[109]

1. Dialogic space creation: establish dialogues with stakeholders
2. Confirmation: research what is and has been happening in that place, including Interrogation: ask questions.
3. Framing of action: proposed next steps based on analysis

Qualitative outcomes evaluation may begin with free-form conversation, structured interviews, or other forms of qualitative data collection, but some researchers have found value in recording these conversations. An ethnographic approach to data gathering, for instance, might involve audio-visual recording of in-depth, guided interviews. The video recording, in particular, may help the researcher notice visual cues from interviewees or otherwise present in the environment. For instance, ethnographic research in healthcare has revealed that conversations between healthcare providers in the corridors—while perhaps seen as unprofessional or

105 Interviewee #8.
106 Becker, "Post-Occupancy Evaluation," 224; Preiser, Hardy, and Schramm, Building Performance Evaluation.
107 Khalid, "Sidewalk Labs' Controversial Data Collection Project Is Now a Company"; "Smart Benches : NYC Parks."
108 Parshall, Evaluating Facilities, 36.
109 Shibley and Schneekloth, "Evaluation as Placemaking: Motivations, Methods, and Knowledges," 21. Emphasis on process as benefit is reminiscent of the way that values assessment of heritage solicits a dialogue about heritage and that process becomes valuable in and of itself.

distracting—are important in coordinating patient care.[110] Becker describes the ethnographic approach used in the aforementioned study as a tool for clarifying the complex "organizational ecology" of social, organizational, technological, and design factors.[111]

Another post-occupancy qualitative outcomes approach seen in practice involves shifting the primary evaluation to those most familiar with the outcomes: the users, clients, or partners. Both MASS Design Group and Gehl Architects typically hand off the project to the client or partner at a certain point for the next steps. The rigorous visioning (goal-setting) process at the beginning of the project with the client, partner, and/or stakeholders establishes project goals and metrics of success. Those metrics and project goals guide each phase of the project, leading to a feedback loop at each phase. However, both MASS and Gehl leave the actual post-occupancy evaluation(s) to the partner/client. MASS positions their role as advisory in outcomes evaluation, supporting partner organizations in their own outcomes assessment.[112] This support might come in the form of a maintenance manual or other steps to support transitioning the organization to their new building. Likewise, Gehl may not conduct the POE themselves, but the team acknowledges that a good dataset of project outcomes is valuable and ought to be built into the project from the beginning. "One thing we often do in our work, especially the public life strategy projects, is help our clients develop and define performance metrics they can use to do impact assessments, whether it's with us or not. So sometimes we'll be engaged long enough to do some of that, but often we [establish] the baseline collection and then provide them with a toolkit they can use later on."[113] The firm involvement tapers off when the scope of work has been completed (be it an initial study, schematic design, or other work), but the relationship with the client or partner, and the established framework for evaluation, sets up potential for firms to ascertain project outcomes without direct involvement in measuring outcomes.[114] While these firms do not offer additional insight into methods for post-occupancy evaluation of social outcomes, specifically, the practices engage with intentional goal-setting, and translate those goals into metrics, to aid partners and clients in their own post-occupancy evaluations.

Takeaways

There are practices in the fields of architecture and preservation that prioritize social outcomes and craft a design process to include outcomes evaluation. Each practice considered dedicates time to assessing the existing social context at the outset of a project, employing a variety of methods for assessing qualitative social data. The methods put people at the forefront – through conversation, observation, or shared activities. At the close of a project, practices also use qualitative methods that rely on people in order to distill social relationships. Ethnographic assessment tools, for instance, offer similar utility both in assessing baseline social context and in assessing outcomes in the post-occupancy phase. The methods Gehl deploys at the outset of a project—interviewing or otherwise soliciting data from stakeholders, observing the site, and spending time at the site—the firm also deploys in post-occupancy evaluations. The processes employed in values-based assessment, ethnographic assessment, visioning (goal-setting), and qualitative post-occupancy research all explicitly engage the expertise of various stakeholders. These practices implicitly and explicitly suggest that social context and social outcomes derive from the values and goals that clients and communities (people) bring to the project. Those partnerships, community or stakeholder buy-in, and successful public participation, are central to social outcomes evaluation, as established in the practices discussed. The emphasis on identifying publics, creatively seeking ways to engage all of these publics throughout the design process, and explicitly and consciously setting

110 Becker, "Post-Occupancy Evaluation," 227.
111 Becker, 227.
112 "Purpose Built: Charting Capital Results."
113 Interviewee #8, in conversation with the author.
114 For that reason, Becker points out that facilities managers are fundamentally more concerned than designers with building-in-use concerns and therefore are the primary audience of POE.

goals for social outcomes are practices in public space design that serve as helpful precedent work for design in the existing built environment. Establishing project goals early is not only critical for determining metrics of success, but also for deciding on an appropriate framework for evaluation. These practices and practitioners, whether engaged in public space design, humanitarian projects, healthcare, or preservation, all bring a specific point of view to their work that explicitly values stakeholder expertise and seeks it out as part of the pre-design phase. The next chapter will consider architects engaged with the historic built environment, specifically, and the process of setting intention in adaptive reuse projects.

Chapter 4

Intention-Setting

Interviewer: Under what circumstances could you foresee undertaking a post-occupancy evaluation?
*Architect #5: "**That's interesting because you really have to put that next to "what are the intentions?**"*

Why study intention?

Intention can be thought of as akin to "project goals" discussed in Chapter 2. As discussed in the Chapter 3, the process of determining project goals is critical to socially-minded practices, both to ensure that stakeholder concerns and values are included in the design and as a means to establishing project goals and metrics of success. Intention drives a project at a fundamental level – offering a reference point for all parties involved in the project. It informs how priorities are set, how architects and others involved in a project make decisions, and—as discussed in prior chapters—establishes goals against which to evaluate project outcomes. Intention for a public space project may involve certain public use goals, or intention for another project may focus on sustainability, profitability, legacy, or any number of goals. In the context of this thesis, intention does not refer to the intention behind the entire project. Instead, in this thesis, intention refers to the project goals in relation to historic preservation (built fabric, interpretation, etc.) specifically. Intention sets objectives and constraints for determining what is preserved in a project and how it is preserved. Setting intention is not a new concept to any architect; it is a critical step to the pre-design phase. However, the process of setting an intention regarding the historic preservation component of an adaptive reuse project merits a closer review of actual practice. A review of relevant literature and analysis of interviews with a small group of architects offers insights into how architects establish intention via-a-vis historic buildings.

Data Collection Strategy

The data in this chapter and the following chapter come from a series of interviews with seven architects. The architects work for various firm types, come from different backgrounds, and possess varying specialties. However, each interviewee shares some degree of experience with adaptive reuse projects. Structured around a set of predetermined multiple choice and open-ended questions, the interview questions were designed to shed light on current practice through a small sample of professionals.[115] One subset of interview questions targeted intention-setting specifically, seeking data about how the architect and/or other stakeholders set intention at the outset of a project. (See Appendix A for full list of questions and multiple-choice options). In essence, this set of questions seeks to know: Who sets intentions and what are the major factors in determining priorities? How is the value of heritage determined and spatialized at the outset of the project?

In the multiple-choice portion of the interview, questions included:

1. What resources or methods do you use when conducting historic site research?
2. What are the biggest challenges in establishing site significance?
3. What factors most significantly impact your firm's design decisions?

115 For further explanation of the interview methodology, refer to Chapter 1, Section 1.2.

In the open-ended portion of the interview, questions included:

1. How do you identify the most important features of the existing site/building?
2. In the planning and design phases, what do you pay particular attention to during site visits?
3. When do standards of practice (LEED, WELL, etc.) come into the conversation?
4. What are the top three guiding principles for your work?

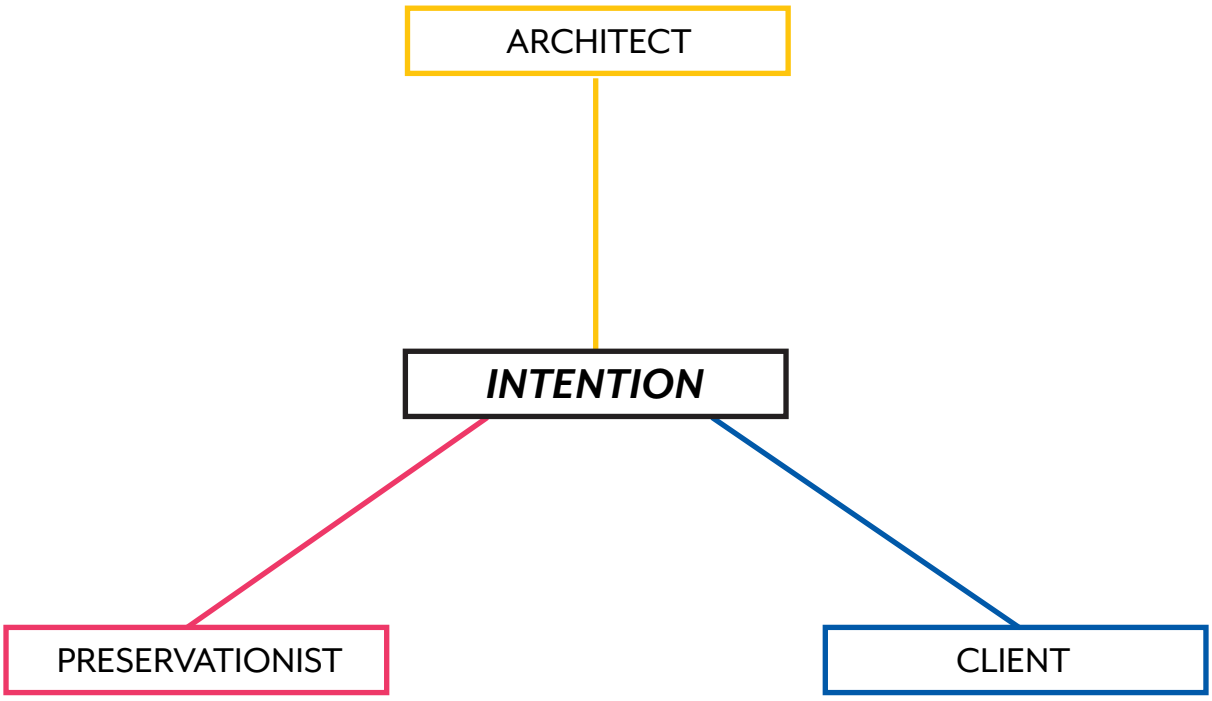


Figure *6 Diagram of three participants in setting intention. Diagram by author.*

Introduction to Data

Due to the nature of the methodology, the data and analysis prioritize the architect perspective in setting intention. It is critical to note, as well, that many architects responded with the caveat that the factors in intention-setting and decision-making vary widely depending on the project. Therefore, interviewees spoke broadly, illustrating points with specific cases, and explaining the general dynamics at play. Additionally, while not all responses pertain directly to work on adaptive reuse projects, responses can be taken in the context of the interviews to have relevance to adaptive reuse projects.

The data supports a division of intention-setting into three broad stakeholder roles: client, architect, and preservationist (Fig 6). There are critical differences in how each stakeholder establishes intention and influences design decision-making. The extent to which client, architect, and preservationist intentions triangulate to form a design outcome varies according to many factors (Fig. 7). The research did not include interviews with clients or preservationists. Data from the architect interviews, with support from the literature, informs the analysis of the role of each stakeholder in setting intention. It is critical to note that in the context of this thesis, preservation policy serves as a proxy for preservationists. While preservation policy cannot fully capture the breadth of work in the preservation field, it offers a generalized approach to preservation that allows the thesis to focus on the architect's role, and a uniform approach to preservation to which architects must respond in designing with historic buildings

Each actor comes to the project with a different role, of course, and corresponding intentions vis-à-vis historic preservation. Top client considerations, regardless of whether the project involves a historic building or not, are 1) program 2) budget 3) schedule and 4) project goals (such as social, environmental, or user experience outcomes) in the process of defining intention. Preservation policy defines intention through federal, state and local policies concerning historic preservation. The exact role depends on the specific policies enacted and the tools of the policy. The tools of policy, as defined in Schuster and

de Monchaux, consist of 1) direct ownership and operation 2) regulation 3) incentives and disincentives 4) establishment, allocation, and enforcement of property rights, and 5) information. These five tools, the authors state, are usually used in combination, rather than purely one or the other.[116] These policy tools ultimately support an intention to retain historic fabric. The architect defines intention and sets priorities through research and expertise, generated through experience, firm mission and profile, and educational background. Each actor's role and priorities define a process of setting intention vis-à-vis historic preservation.

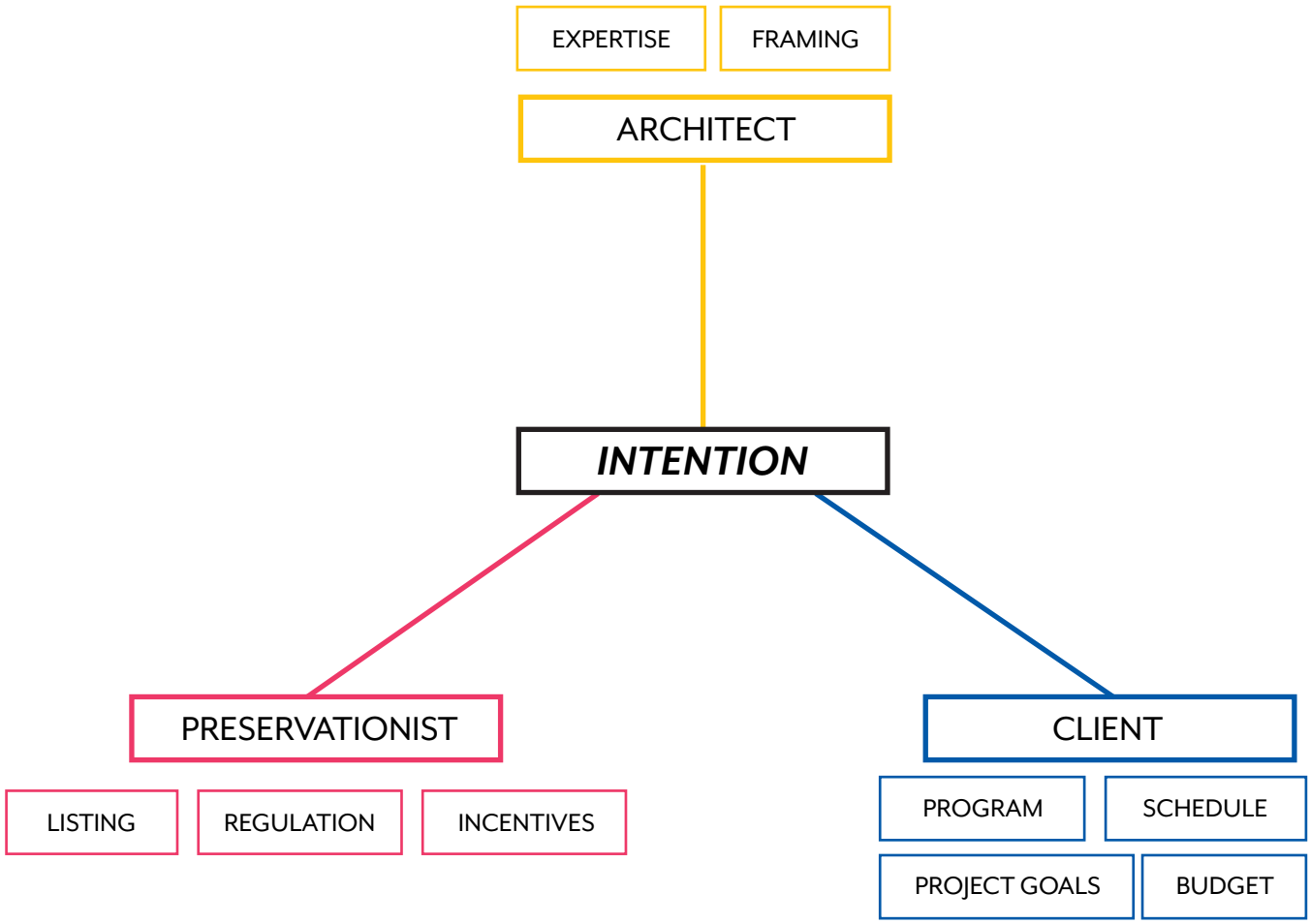


Figure *7 Diagram of three participants in setting intention in context of their critical differences. Diagram by author.*

Client

The client understandably commands a significant force in intention-setting and is considered a key driver of any project. Clients approach intention through the lens of the program, budget, and schedule, as well as other project goals, such as social, environmental, or user experience outcomes. An architect may help a client develop their intentions for the project, or the client may have a clear intention already, but in either case architects work with clients in the pre-design phase to fully understand the client intentions, project goals, and other factors influencing project design and delivery.[117] The client may or may not clearly set an intention for an adaptive reuse project in terms of preservation strategy, but their program, budget, and schedule constraints will inform the subsequent design decision-making process. Six architects noted that program requirements were one of the top three most important considerations in design decisions, followed by budget (cited by four interviewees), and client demands (cited by three architects). The importance of these client-determined factors

116 de Monchaux and Schuster, "Five Things to Do."

117 Architect #4, in conversation with the author; Architect #5, in conversation with the author; Architect #7, in conversation with the author.

in design decision-making highlight the primacy of the client in intention-setting.

Program, budget, and schedule strongly influence how interviewees make design decisions about the historic building. Interviewees noted budget, in particular, as a key factor in prioritizing their decision-making. For instance, an architect working on developer projects might consider first and foremost the client's bottom line, "where the client wants to be and what market they want to be in" when assessing costs associated with demolition, restoration, or other preservation strategies.[118] The interviewees all mentioned "good bones" (infrastructure, structure, space, or even decorative features) of a historic building as a tool for meeting client priorities .[119] Architect #4 summed it up as follows: "Good bones could be decorative features, could be just exposing existing materials that maybe were not historically exposed, it could be understanding how we could reuse shafts and cavities to run new infrastructure. So a lot of it is evaluating the existing building with an eye towards the nature and level of renovation that has to occur."

Essentially, the client's role in setting intention is extremely important. The client priorities set up the intended project goals and parameters, which then inform the architect's work for designing a product that will achieve client goals. There is generally a separation between the client's role in intention-setting versus design decision-making. Architect #7 clearly delineated between the two: "Client demands may or may not be a factor [in design decision-making], but that doesn't really drive things for us. We have our process and it is what it is and it leads to the outcome. That's what the client is paying for. They may like the process, but they're not paying for the process."[120] The program, budget, schedule, and other specific project goals then inform how an architect uses the "good bones" of a building, or otherwise designs a restoration, renovation, or other design strategy in the historic fabric to achieve client goals.

Thus, typically, the design decision-making rests in the architect's hands. However, interviewees also reported that clients may have specific desires regarding the treatment of the historic fabric. Architect #1 stated that clients may come to the architect with a preservation intention: "The client can have preconceived ideas about what they want to do with the building, which may conflict with where the building was during the period of significance. That's particularly for private clients."[121] In other words, the explicit client-directed preservation intentions may conflict with preservation policy intention. For this reason, Architect #5 shared that clients may resist designation, which can trigger preservation policy tools.[122] Whether or not clients have clear ideas about preservation intention, the client is clearly a major force in setting intention and informing decision-making.

Preservationist

As mentioned at the beginning of the chapter, preservation policy serves as a proxy for preservationists in the context of this thesis. Preservation policy certainly does not fully capture the breadth of work in the preservation field, in which practitioners may be involved to varying degrees and in varying capacities in setting preservation intention, design decision-making, and other roles with individualized attention on projects. However, for the purposes of this thesis, preservation policy serves as a generalized proxy for the preservationist role in a given project. Consequently, the thesis can focus not on the preservationist's role, but on the architect's role.

Preservation policy refers to the federal, state, and local policies and legislation that impact historic preservation projects. As Schuster and de Monchaux outline, preservation policy tools include direct ownership; regulation; incentives and disincentives; establishment, allocation, and enforcement of property rights; and information. These tools provide the remaining mechanisms for setting preservation intention and, thus impacting design decision-making in adaptive reuse projects.

Designation as a historic landmark at the local, state, and/or federal level activates the corresponding local, state, and/or federal preservation policy tools.[123] Designation recognizes that the historic property offers value to the broader national,

118 Architect #3, in conversation with the author.

119 Architect #4, in conversation with the author; Architect #5, in conversation with the author; Architect #3, in conversation with the author; Architect #7, in conversation with the author.

120 Architect #7, in conversation with the author.

121 Architect #1, in conversation with the author.

122 Architect #5, in conversation with the author.

123 Designated building are referred to as "landmarked" or "designated" in New York, where most interviewees work

state, or local community. As Schuster and de Monchaux write, designation of a historic property "...certifies worth in a broader societal sense, albeit through the perspective of those who possess particular information."[124] Historic preservation policy relies heavily on designation, which is essentially a determination that a historic site possesses some kind of value. Architects working on the adaptive reuse of a designated historic building may have to respond to the designation findings depending on preservation policy requirements relevant to the project. Specific policies or laws that interviewees referenced include the Federal Historic Rehabilitation Tax Credit program, Section 106 of the National Historic Preservation Act, and rules set forth by the New York City Landmarks Preservation Commission.

Preservation policy intentions, as has been discussed already, establish an expectation of public good as justification for the creation of these policies. However, the actual requirements of the policies tend to focus on treatment of the physical building fabric. Each preservation policy tool affects intention-setting in different ways, varying from dictation of what will be preserved and how via direct ownership, to passive provision of information without any obligation on the part of the architect or owner to acquiesce. The designation kick starts different responses by the architect and/or client depending on the type of designation and the specific applicable policy. For instance, designation at the federal level through the National Register of Historic Places does not specifically require a private building owner to comply with any preservation standards, although it does invoke other policy tools like sharing of information; however, designation at the local New York City level through the New York City Landmarks Preservation Commission (LPC) requires that the building owner comply with any and all LPC requirements. In the case of both the federal National Register and local LPC, each set of policy tools ultimately returns to an emphasis on retention of historic fabric.

Direct Ownership: Direct government ownership and operation positions government as client. In the case of direct ownership, client intention and preservation policy intention are united. One interviewee shared that in public work, the primary considerations in design decision-making "[move] into more of the regulatory factors: secretary of interiors' standards, agency rules." [125] Direct government ownership, or even federal funding for a project, trigger Section 106 of the National Historic Preservation Act, for instance. Section 106 requires that federal agencies must "identify and assess the effects its actions may have on historic buildings."[126] Mitigation of adverse effects on heritage may vary. It is worth noting that Section 106 Review did not explicitly come up in interviews, although one interviewee referred to it as an "agency rule" that impacts preservation intention.

Incentives: Incentives motivate a building owner to do something in exchange for a benefit. For instance, the federal and state historic preservation tax credit incentive requires compliance with federal and state preservation standards in exchange for a certain amount of tax reduction. Designation on the National Register of Historic Places allows a property owner access to the Federal Rehabilitation Tax Credit, and potentially any available state historic tax credits. The Federal Historic Rehabilitation Tax Credit (as well as state tax credits) require that adaptive reuse projects meet the guidelines of the Secretary of the Interior's Standards for the Treatment of Historic Properties.[127] Many others have written extensively about the Standards, as they are simply called, as well as the historic tax credits—some applauding their impact and some criticizing them.[128] While the National Park Service's sets of Standards are similar, for the purposes of this thesis, which focuses on adaptive reuse, the Standards for Rehabilitation provide greatest relevance. The Standards for Rehabilitation focus on the retention of historic fabric through reversible interventions, new interventions deferential to the historic building, gentle cleaning to avoid damage, repair rather than replacement, and accurate portrayal of the building history rather than recreation or falsification of historic elements. The State Historic Preservation Office and the National Park Service must approve design plans in order for the owner to receive the relevant tax credit. The requirements for meeting the Standards result in a set of constraints placed on the architect's ability to make decisions about what is preserved and how it is preserved.

For example, in renovating a high-end restaurant, an interviewee shared that the firm had to preserve remaining historic fabric for a certain number of years in order for the property owner to receive historic tax credits: "This got tax credits if you kept certain things. If we kept the ceiling, which was beautiful, and the ceilings [in another area], which were not beautiful—they were acoustic tile... But we were told if we kept the ceilings—because everything was already gutted from the rest of it, and kept the marble on the walls, that we would get the tax credits. And I think that endured for 5 years." The policy sets out an

124 Schuster, "Making a List and Checking It Twice: The List as a Tool of Historic Preservation."
125 Architect #1, in conversation with the author.
126 "Section 106."
127 "The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings."
128 Ryberg-Webster, "Urban Policy in Disguise: A History of the Federal Historic Rehabilitation Tax Credit."

intention to retain physical building fabric, resulting in design decisions made to uphold preservation policy requirements and perhaps in contrast to the design decisions that the architects and client might otherwise have pursued.

Regulation: Architects certainly engage with regulatory policies—most obviously by meeting regulatory requirements where necessary. Certain actions like designation may trigger regulation. Section 106, discussed above in relation to direct ownership, comes in to play when another entity uses federal funding for a project. This form of regulation requires identification and assessment of impacts on historic properties, as well as mitigation of adverse impacts.

Designation, as well, may trigger regulation, particularly at the local level. In New York City, where many of the interviewees work, designation may trigger regulatory approval processes depending on the nature of the work. While meeting the Secretary of the Interior's Standards is not required if a building owner does not seek tax credits, a regulatory tool like that supported by the Landmarks Preservation Law does require compliance, setting constraints on what is preserved and how it is preserved. Architects help building owners to comply with these regulations. For instance, several interviewees discussed the process of presenting a design proposal to the Landmarks Preservation Commission (LPC) to gain approval before moving forward with work. For instance, interviewee projects include additions that are carefully designed and located so as to avoid or minimize any disrupted sight lines of the historic building.

It is common for municipal preservation ordinances to operate such that designation as a local landmark (or perhaps state/national register) then requires the local preservation commission to review proposed modifications. Moreover, Avrami, et. al. reveals that 86% of local ordinances evaluate proposed modifications based—directly or indirectly—on the Secretary of the Interior's Standards. The Standards, with their emphasis on retention of historic fabric, set the tone for what is preserved and how it is preserved throughout a vast majority of preservation projects in the United States.

Information: The policy tool of information essentially refers to the collection and distribution of information about historic properties. Information comes in several forms, including technical support, listing, and designation reports.

The Secretary of the Interior's Standards for Treatment of Historic Properties are a form of information, sharing with preservationists, architects, building owners, and others, the national standard for how preservation ought to be carried out. Additionally, the National Park Service has developed a large catalogue of technical materials, called Preservation Briefs, that have become a standard for how to conserve historic buildings. Topics include descriptions of how to repair various historic building materials and structures, appropriate principles for additions to historic buildings, and how to retrofit historic buildings for energy efficiency and seismic activity. Preservation advocacy groups frequently offer technical support, as well.

Schuster proposes that listing—the act of identifying a site as historic, but not necessarily with any protection—deploys the preservation policy tool of information.[129] Listing, which may include designation, brings attention to the historic property and transmits information about its value to society. The designation report then enumerates the specific details about why a property is valuable to society. In fact, interviewees frequently mentioned the designation reports as important sources of information in researching historic buildings.[130] The reports set up a framework for architects to develop a preservation strategy and make design decisions. "The landmarks report often has a lot of resources that describe the kind of key design features of the building and why it became a landmark, which is really helpful for how you approach insertions and prioritize."[131] The interviewees draw a clear connection between the priorities conveyed in the designation report and their own design decision-making process.

Architects working with designated properties are not required to make their own determination of the building's significance. The information in the designation report—essentially what to preserve—allows room for architects to form a design strategy for the how of preservation (taking into consideration additional policy tools such as regulation or incentives). Architect #4 explains the interplay in practice:

Not to establish significance in the way we talk about it and know about it and think about it for preservation, but in parallel (I think it's related) to establish our interpretation of significance relative to the built fabric that's there, the character of that built fabric, how to meaningfully use it to its best advantage to further the client's mission or goals... We're essentially through design trying to highlight the things that we think are important [as determined] through conversation and through our own research. The clients then typically aren't demanding [a significance assessment] of us, because we're not being asked

129 Schuster, "Information as a Tool of Preservation Action," 115.

130 Paul Segal (Former Principal, Paul Segal Associates Architects), in discussion with the author, November 2019.

131 Architect #3, in conversation with the author. Emphasis added by the author.

to establish significance of these buildings for a designation standpoint.[132]

Designation serves as the basis for many of the preservation policy tools discussed. Direct government ownership and operation, incentives, regulation, enforcement of property rights, and information all serve to set intention in preservation projects. While the leverage and exact mechanisms vary, preservation policies share a common emphasis on aesthetic considerations, particularly the retention of historic fabric. That these preservation policy tools are usually used in combination further reinforces the shared goals behind these tools.[133] For instance, while designation on the National Register of Historic Places involves the policy tool of information, the designation opens up the possibility to incentivize a building owner to use the incentive of Federal Rehabilitation Tax Credits, in exchange for approval by preservation agencies, which evaluate projects in part according to a proposed project's compliance with the Standards. The ubiquitous Secretary of the Interior's Standards, for instance, play an important role in how preservation policy (as a proxy for preservationists) sets intention for adaptive reuse projects.[134] This particular set of documents emphasizes retention, repair, restoration, and (as a last resort) replacement of original historic fabric. Individual preservationists who enact preservation policy, consult for architects, advocate for certain modes of preservation, and inhabit other roles, may express other views, propose other ways to preserve heritage, or carry out the policies differently, preservation policy serves to represent a codified version of preservation practice and allow focus on the architect's work, for the purposes of this thesis.

Architect

In approaching the question of intention in adaptive reuse practice, one usually thinks first of client intention as preeminent. The interview data corroborates this; however, the data also indicates that architects can and do frame intention. Of course, architecture firms can select the types of clients and projects to take on, to specialize in a typology or a mode of design, or to adopt a certain kind of business model. However, findings indicate that architects can set intention or shift the framing of a project, impacting intention-setting. While the interview data focuses on historic preservation intention, the data reveals that interviewees can play a role in setting other kinds of intentions, such as intentions relating to sustainability and some project-specific goals. The architect's role in and process for setting other kinds of intention illuminates the factors at play in setting preservation intention. The data also reinforces an assumption made as part of the basis of this thesis: architects can influence or re-frame preservation intention through their own historic research. The data reveal nuances in the architect's role in setting preservation intention.

Sustainability: Sustainability intention-setting, while of course invoking a separate set of considerations, help to illuminate the general landscape of intention-setting for the interviewees. Several interviewees discussed the importance of sustainability to their work, revealing their own desire to have a role in setting intention around sustainability. Some interviewees set sustainability goals based on the client's goals, but recognize the importance of their role in guiding a conversation with the client around sustainability.[135] However, two others expressed that it is not a conversation that needs to be had with the client: "Sustainability, which is something that we push, almost very quietly and almost invisibly in our standard specifications and our standard drawn details. There is no such thing as a LEED project, it's all the same design."[136] The interviewee's efforts to include sustainability in a project speaks to the influence of the architect's intention to pursue a goal of sustainability. Other data underlines this point. Panelists at a Fall 2019 AIA NY event unanimously agreed that the best way to add sustainable features to a project is to not discuss it with the client and instead just do it. Or, if you do need or want to discuss it, to frame it through other benefits to the client. For instance, in pushing a Passivhaus design, one architect recommended highlighting dramatic reduction in heating and cooling costs, as well as virtually eliminating pests and allergies. Whether the architect elects to openly discuss or quietly make such design decisions, either move indicates an architect-led intention to achieve a certain level of sustainability in the project. To advocate these positions requires architect familiarity with the topic and a clear definition of "how to design with environmental sustainability in mind."[137]

Firm- and Project-Specific Goals: While most interviewees cited client intentions as primary factors in design decision-

132 Architect #4, in conversation with the author.
133 de Monchaux and Schuster, "Five Things to Do," 5.
134 Avrami, Leo, and Sanchez, "Confronting Exclusion."
135 Architect #4, in conversation with the author; Architect #7, in conversation with the author.
136 Architect #1, in conversation with the author.
137 Architect #4, in conversation with the author.

making, several cited specific project goals that speak to the architect's own intentions. One interviewee expressed an intention of designing a project that could join the canon of architecture, potentially taking on iconic status, and contributing to the legacy of the firm. The primacy of the concern dovetails with client's goal to build an iconic building, something that would be achieved through both public and specialist evaluation of the architectural design. This intention implies an attention to how the building will relate to the context. Architect #3 stated: "...we also asked 'What does it mean to be a New York City skyscraper in the context of this landmark [that we were working with]?'"[138] Iconicity has an outward-facing evaluation, while design for some interviewees remains quite personal. One architect cited the primacy of concept, offering another architect-driven project intention that stands apart from client and policy intentions.[139]

Historic Significance: The previous section of this chapter, which addresses the role of preservationists as loosely represented by preservation policy, describes the varying amounts of forcefulness of the policy tools and the underlying intention to retain historic fabric. The thesis begins with the knowledge that architects play an important role in adaptive reuse—certainly in crafting a design strategy. But the interview data sheds light on the nuances of an architect's role in shaping preservation intention. The crux of this nuanced ability to frame preservation intention hinges on the degree to which an architect can 'speak the same language' as the preservation policies that establish significance and that entice or enforce preservation.

Designation documents certainly loom large in preservation intention-setting. As established in the previous section, the designation document is information and can be considered a form of policy. Five out of the seven interviewees cited designation documents (LPC designation report or National Register of Historic Places nomination form, for instance) as key resources in researching historic buildings. The rationale for designation—the statement of significance—is the crux of the designation document. The designation document defines significance, or in other words, it identifies what is important to preserve. This means that the designation document often forms the basis of architect interpretations of the historic property (as opposed to an architect establishing significance and determining what is worth preserving about the property on their own.) As Architect #4 stated in the previous section on policy, an architect is not obliged to define the building significance. Instead, architects make design decisions about treatment of historic fabric based on interpretations of the client's goals, the requirements of preservation policy, and the architect's own lens. For instance, one interviewee interested in energy efficiency talked about balancing client and preservation requirements, and still achieving improved energy efficiency by preserving existing passive heating and cooling systems in a historic building.[140] Another interviewee gave an example of studying a historic building through site visits and determining that a certain spatial quality is integral to the building and cannot be lost, choosing to design around the objective of preserving that quality of space.[141] A third interviewee discussed a project through context, embracing a shift in the neighborhood character "beyond itself" by introducing new geometry and materials.[142] In these cases and many more, the interviewees navigate the terrain of understanding the preservation intention set by others and interpreting it relative to project goals. That process of interpretation occurs through the architect's own design lens—integrating energy efficiency, advocating for their spatial interpretation of the building in a design, or leaning in to contextual shifts. There may be subtle shifts in intention, but for many, particularly when the designation document serves as a main source of information about the building, the intention of the designation document (and therefore, intention in preservation policy) sets the preservation intentions—what is preserved and how it is preserved. This is not to say there is not architect-driven interpretation and design in such projects, but that hands are tied in certain aspects because of preservation policy. For instance, there may requirements that windows are repaired rather than replaced, or that an addition cannot be visible from the street. The reliance on designation information—framed in this thesis as a proxy for the preservationist —means that the preservationist is "contributing to, if not creating, the conditions within which others will act."[143]

However, some interviewees—particularly those with preservation expertise—indicate that their practice allows them to negotiate the particulars of the designation document(s) (Fig. 8). One interviewee stated: "...if we were solely a preservation practice, the answer to that question [about how significance is determined] might be different..." [144] That is to say, without in-house preservation expertise, the interviewee reveals the firm's limited ability to research historic buildings. In fact, two

138 Architect #3, in conversation with the author.
139 Architect #7, in conversation with the author; Architect #6, in conversation with the author; Architect #3, in conversation with the author; Architect #4, in conversation with the author.
140 Architect #7, in conversation with the author.
141 Architect #4, in conversation with the author.
142 Architect #6, in conversation with the author.
143 Schuster, "Information as a Tool of Preservation Action," 102.
144 Architect #4, in conversation with the author.

interviewees cited employee skillset as an obstacle to historic research. Select architects with preservation expertise are able to work within the confines of policy-defined significance, but lack of skillset hinders those efforts. Interviewees reported challenges in employee ability to identify historic information, "synthesize and communicate the data that's found," and "reframe it in such a way that it's applicable and actionable for the project."[145]

The architects with in-house preservation expertise also must consider the designation information provided in designation documents. While designation determinations must meet the traditionally narrow definition of significance in preservation policy, preservationists working in governing bodies must make significance determinations on a project-by-project basis, leaving room for some subjectivity and interpretation.[146] Against the complex background of significance, and with no incentive or requirement to engage with significance and designation, interviewees tended to rely on designation reports for historic research.

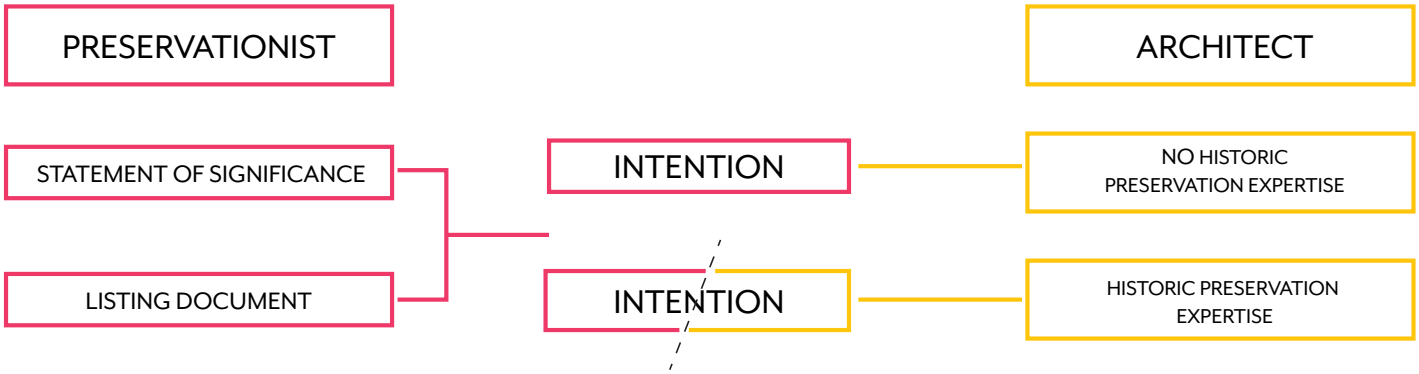


Figure *8 Diagram of critical differences between architect and preservationist in setting intention. Diagram by author.*

Architects with knowledge of historic preservation policy and experience with historic research skills can leverage the subjectivity of the significance statement to open it up for interpretation. Such interviewees speak about the detail they are able to mine from a plethora of historic documents, such as historic photographs and archival documents.[147] These are the same types of documents that a preservationist would consult in writing a designation report, meaning that architects with preservation expertise are in a position to re-frame, expand upon, challenge, or otherwise engage with the basis of the designation and particularities of what should be preserved and how. The architect uses these primary resources to craft an understanding of the intent of the architect, occupants, client, and others involved historically in the existing building: "Invoices, correspondence, and all that, which will give you the design intent as much as the final design."[148] Architect #1 offered a helpful example from a historic renovation project:

"We were looking at making changes to the...landmarked storefront facade. We knew it was not original, but we had to justify how to make that change. [The client] has terrific archives: letters from ... all their old customers. We found a watercolor of the original design, which was never executed, which we were looking to execute. We used the photographs of the watercolor at Landmarks as the smoking gun, and it worked."[149]

Firms with this in-house preservation expertise can leverage and re-interpret the primary source documents to support their own interpretation of historic significance and advocate for a design that may be differ from the designating body's interpretation of the site. However, it is important to note that the above example and others like it do not challenge the fundamental intention to retain historic fabric. Instead, the architects work within that intention to retain historic fabric, using their knowledge and expertise to push back on how specific historic fabric ought to be preserved. The tools of historic research and historic preservation expertise provide leverage to shift preservation intention as determined by preservationists. While no architect is required to determine preservation intention, nor form their own view of what and how to preserve, those without preservation expertise typically rely on secondary sources such as the designation report. The capacity to impact intention lies

145 Architect #7, in conversation with the author; Architect #4, in conversation with the author.
146 Schuster, "Making a List and Checking It Twice: The List as a Tool of Historic Preservation," 10.
147 Architect #1, in conversation with the author; Architect #2, in conversation with the author. Emphasis added.
148 Architect #1, in conversation with the author.
149 Architect #2, in conversation with the author, 1.

in familiarity with the issues at play—expertise or otherwise access to knowledge on a given topic.

Social Benefit in intention-setting

As discussed in the prior chapters, the literature and interviews with architects identify social outcomes as part of adaptive reuse project goals in only limited ways. Because social outcomes would not typically come up in a discussion of adaptive reuse, the interview questions concluded with a question designed to prompt interviewees to share their understanding of social inclusion in architecture, and perhaps in their own practice. The question was: Are there any projects—whether yours or others—that could be examples of projects that had social inclusion[150] as a goal? The responses overall tracked with the way architecture literature conceives of "social outcome," as discussed in Chapter 1.

Interviewees associate "publicness" with social inclusion. Interviewees cited projects that share some kind of publicness, revealing an assumption that inclusivity is embedded in publicness. Publicness (sometimes used interchangeably with accessibility) falls into one of three categories: physical, programmatic, or visual. Two interviewees pointed to projects that are physically accessible in terms of ADA compliance. Four interviewees spoke of physical accessibility in terms spaces that the public is allowed to enter, such as a library or park. For instance, two of these interviewees specifically cited government clients commissioning public buildings as a clear example of a projects intended to produce social benefit. A majority of interviewees spoke about social inclusion in terms of program, citing publicly-accessible spaces and/or spaces in service of community needs – projects such as schools or public housing. The third trend amongst responses relates to perceived accessibility. Two interviewees spoke about urban spaces, like parks, as spaces where "everyone feels comfortable."[151] One interviewee also spoke about the importance of perceived access through transparency to avoid "[imposing] the building "upon the public, visually speaking."[152] The three major trends in this set of interviewee responses reveals how this group of architects tends to think of social inclusion as a project goal that is dependent on the client.[153] For instance, one interviewee responded: "So in general whenever we can, we imagine that a project is inclusive even if it might not be due to other forces. But thinking about public space, accessibility, we're very dedicated to these questions."[154] These conceptions of publicness align with the way architecture literature discusses social benefit as improved quality of life, public access, personal connection to place, and meeting community needs (through program).

It is significant to note that even when interviewees cited historic preservation projects, the rationale for social benefit both relies on program and cites historic preservation in itself as a benefit. One interviewee mentioned that a project had won a preservation award: "[The project] made the neighborhood a lot better... And it won a New York State Preservation League award." This comment points to a conflation of the very act of preservation with social benefit, as opposed to preservation setting up an expectation of social benefit. The perception among interviewees that client and program, and the act of historic preservation, determine the social outcomes of the project misconstrues the way designation sets up an expectation of social benefit. Instead, designation sets up an expectation for social outcomes as a consequence of preservation, not embedded in preservation. In other words, there is a separation between preservation and social benefit.

Takeaways

A study of intention-setting reveals that intention—the underlying argument for what is preserved and how it is preserved—is set through a triangulation of client, preservationist (as approximated through preservation policy for the purposes of this thesis), and architect. The client sets intention through program, budget, schedule, and other project goals—perhaps including a specific idea of preservation intention. The preservationist (loosely represented in this thesis through preservation policy) sets intention through various policy mechanisms that emphasize retention of original building fabric and predicated on an rationale contained in a designation report. What to preserve, based on designation reports, and how

150 'Social inclusion' is a sub-category under the larger umbrella of 'social outcomes.' The term is viewed as a type of and proxy for 'social benefit' in this thesis research.

151 Architect #7, in conversation with the author.

152 Architect #3, in conversation with the author; Architect #7, in conversation with the author.

153 Architect #4 gave examples of program-driven projects like Via Verde or Dream Academy (community center-turned-school and housing).

154 Architect #6, in conversation with the author.

to preserve, based on the Standards or other policy mechanisms, emphasize aesthetic considerations, particularly retention of historic fabric. Interview data illustrates that while clients and preservation policy strongly impact intention, architects do have the ability to frame projects and shift intentions. The capacity to impact intention lies in familiarity with the issues at play—expertise or otherwise access to knowledge on a given topic. The dynamics of intention-setting in adaptive reuse projects highlights the importance of designation reports, in conjunction with other preservation policy tools, in setting intention. However, architect expertise in historic research can result in a re-interpretation of what is preserved and how it is preserved.

It is worth noting that interviewees did not mention social benefits in regards to intention or design decision-making. Instead, interviewees shared perceptions of social benefit that tie social benefit to client and program, as well as a sense of publicness. Conceptions of publicness include spaces that are publicly-accessible, such as a library or park, spaces that are in service of community needs, such as schools or social housing, spaces that are physically accessible by way of ADA compliance, and projects that are visually accessible, by way of transparency. However, while historic preservation policies are predicated on an assumption of social benefit (and the field of architecture may claim social benefit), the data shows that social benefit does not factor in to intention-setting and does not overlap with preservation intention.

Chapter 5

Post-Occupancy Evaluation

"You don't know unless you go back and you see how people are using it. ... It's a very important tool for designing things correctly. If you don't get that kind of [post-occupancy] feedback from actual use after its done, you don't know whether your design intentions were successful of not."-Architect #5

Why Study Post-Occupancy Evaluation?

As discussed in Chapter 2, post-occupancy evaluation (POE) is designed to assess building outcomes, typically in relation to a certain project goal or set of goals. In other words, POE asks if a building has achieved the project goals. As such, establishing clear goals is paramount to evaluating outcomes, as discussed in Chapter 3. The review of POE literature in Chapter 2 extracts several key categories of evaluation: building use (program), physical performance, project performance, and preservation performance. However, POE literature does not consider social outcomes. Select practices do establish social outcomes metrics and evaluate social outcomes, as established in Chapter 3, but not specifically in relation to adaptive reuse.

The concept that feedback helps designers rectify mistakes, learn, and design better in the future undergirds the practice and study of post-occupancy evaluation. In the case of socially minded practices, post-occupancy evaluation serves as proof of concept for some profound theories connecting social dynamics and design. The interview methodology, then, turns to other practices with adaptive reuse experience and without an explicit focus on social outcomes. While POE has the potential to be quite useful, it is not widespread. Interview data offers insights into current post-occupancy practice amongst the interviewees. While primarily concerned with post-occupancy evaluation, the interviews also covered other kinds of post-occupancy contact with projects, including informal contact with former client groups, revisiting projects, and planning for maintenance.

Data collection strategy

Interviews followed a critical line of questioning about current practices in post-occupancy evaluation and other post-occupancy practices. (See Appendix A for full list of questions and multiple-choice options). In essence, this set of questions seeks to know: Who carries out post-occupancy evaluation and why? How is the evaluation carried out? After project completion, what is the relationship of an architect to the built work?

1. In the multiple-choice portion of the interview, questions included:
2. When do clients request a maintenance plan?
3. On what percent of projects do clients request additional work at some future point?
4. On what percent of projects do you carry out post-occupancy evaluation?
5. What actions do you typically undertake at the conclusion of a project?

In the open-ended portion of the interview, questions included:

1. In cases where you have either formally or informally conducted post-occupancy evaluations on your projects / revisited projects some amount of time after finishing it, what do you look for? How do you document those things?
2. Can you give me an example of a visit where you noticed a change in the neighboring community or immediate vicinity of the building?
3. Can you give me an example where you were able to apply lessons-learned from one project to another?
4. What would you like to know about how your designs have performed over time?
5. Under what circumstances could you foresee undertaking a post-occupancy evaluation or otherwise following the evolution of a building after completing the project?

Who undertakes a formal post-occupancy evaluation?

There is subset of literature on post-occupancy evaluation that focuses on understanding why businesses, governments, and other organizations do or (more often) do not carry out post-occupancy evaluations. While post-occupancy literature does detail the importance of POE, this sector of literature also grapples with the challenges of expanding POE in practice.[155]

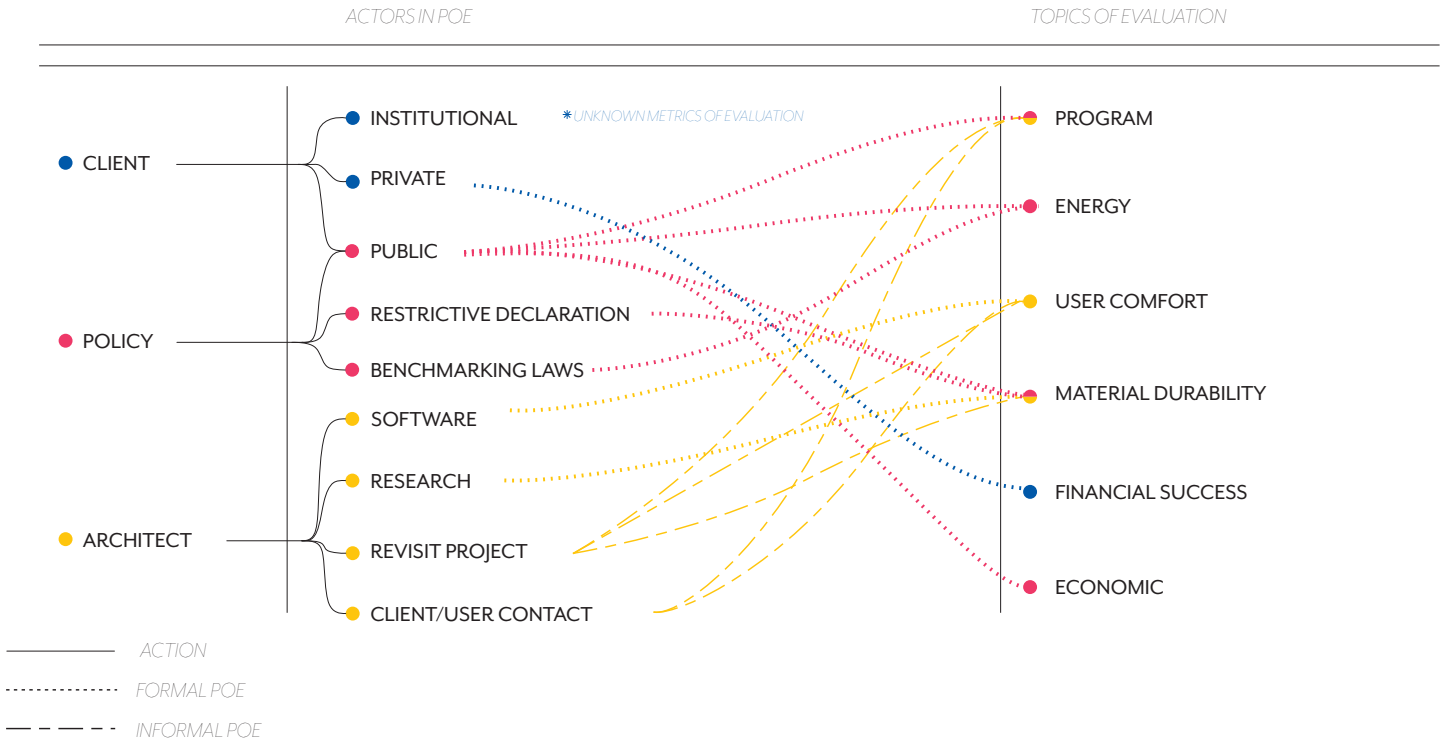


Figure *9 Diagram summarizing actors and methods in POE. Diagram by author.*

Despite widespread acknowledgement of the value of POE to practice, it is not common. Private residential and commercial clients typically do not engage with any kind of formal POE. No interviewees reported that private clients, including residential, commercial, etc., contracted them for POE. Architect #6 stated of residential clients: "I don't think clients even do

155 Bordass and Leaman, "Building Performance Evaluation in the UK: So Many False Dawns"; Becker, "Post-Occupancy Evaluation"; Federal Facilities Council, Learning from Our Buildings; Baird and Victoria University of Wellington, Building Evaluation Techniques; Preiser, Hardy, and Schramm, Building Performance Evaluation.

post-occupancy for themselves. And then they wake up 10 years later and it's like 'Let's renovate again.'"[156] Other interviewees indicated that the lifespan of projects preempted post-occupancy evaluation—the project was too short-lived to have been evaluated years later. In the U.S. in particular, "there seems to be less concern by clients to evaluate the performance of what is often a one-time building or outdoor space complex."[157] One interviewee offered the view that other client types, such as non-profit clients, may not be able to afford this service or even consider it as an option.[158] Since performing a formal post-occupancy evaluation is not the norm, the exceptions offer rich insight into conditions conducive to POE.

I**nstitutional**: Interview data reveals that institutional clients are relatively more engaged in post-occupancy evaluations.[159] The motivation for large institutions to carry out POE may be related to their long-term stewardship of properties. Shibley and Schneekloth note that large institutions are interested in accountability, because they are also responsible for maintenance, construction, management, and long-term outcomes.[160] While POE does factor into institutional building work, the institutional client typically has their own protocols for carrying out POE that either limits or does not involve the architect in that process.[161] Even Architect #7, who has expertise in post-occupancy evaluation, notes: "We personally are responsible for 0-10% [of POE] and I think part of it is the client group, particularly institutional client groups, have a protocol already in place. Which isn't to say we wouldn't like to be more involved."[162]

Academic interest and academia as driver of POE also resides in institutions. Early hot-beds of post-occupancy evaluation include programs at University of Wisconsin-Madison and University of New Mexico under the directorship of Wolfgang F.E. Preiser, as well as landscape architecture, psychology, and architecture departments at institutions such as University of California Berkeley, City University of New York, and University of Maryland.[163] Due to time and budget constraints, "most theoretical and pragmatic work on POEs in the United States has been carried out by academics and their design students" rather than professional designers, at least as of 1998 .[164]

Government: While interviewees did not discuss government clients and POE, it is worth discussing public clients and POE as a corollary to the discussion of institutional clients and POE. Like large institutions, governments are long-term property owners. Furthermore, they are also accountable for efficient expenditure of public funds. Historically, post-occupancy evaluation developed in Western Europe in the 1960s and 1970s, correlating with increased government spending for public housing, public medical facilities, and other government-funded facilities. In this context, post-occupancy evaluation became attractive for its ability to track the efficacy of government expenditures for public benefit. In the United States, although the scale of public infrastructure spending was relatively small compared to that in Europe, interest in tracking spending against outcomes held great appeal as well. The General Services Administration (GSA) began an initiative to conduct post-occupancy evaluations of buildings in their purview in the 1970s. Recent GSA initiatives include studying the actual energy efficiency of 12 federal buildings designed for energy efficiency (Fig. 10) and the Emerging Technologies program, which evaluates energy efficient technologies in GSA buildings.[165] This and other evaluations support accountability and efficiency. The Federal Facilities Council Report enumerates benefits of post-occupancy evaluation and evidence-based design, including data to inform policy development, testing new concepts, justification of major expenditures, support building adaptability and improved functionality during building life-cycle, "making design professionals and owners accountable for building performance," and bringing stakeholders together in discussion.[166] Post-occupancy evaluation is also useful in assessing outcomes for non-paying clients, such as students, prisoners, and employees.[167]

Outside of direct government ownership, there are limited circumstances (at least in the United States) in which policy encourages or requires post-occupancy evaluation. In New York City, Local Law 84 of 2009 requires certain building owners to produce an energy audit every year. The energy audit evaluates actual energy and water consumed in that building.

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156 Architect #6, in conversation with the author.
157 Marcus and Francis, People Places: Design Guidelines for Urban Open Space, 346.
158 Architect #4, in conversation with the author.
159 Architect #7, in conversation with the author; Architect #4, in conversation with the author; Interviewee #8, in conversation with the author.
160 Shibley and Schneekloth, "Evaluation as Placemaking: Motivations, Methods, and Knowledges."
161 This may be particularly significant for this study, as many universities/institutions commission adaptive re-use and renovations.
162 Architect #7, in conversation with the author. Emphasis added.
163 Marcus and Francis, People Places: Design Guidelines for Urban Open Space.
164 Marcus and Francis, 345.
165 GSA Public Buildings Service, "Assessing Green Buildilng Performance: A Post-Occupancy Evaluation of 12 GSA Buildings."
166 Federal Facilities Council, Learning from Our Buildings, 3.
167 Becker, "Post-Occupancy Evaluation."

Figure *10. National Park Service Midwest Regional Office in Omaha, Nebraska. The GSA evaluated evenrgy efficiency of this building as part of a 2008 study.*

Subsequent local laws grade each building based on Energy Star energy efficiency standards.[168] As another example of government requirements for post-occupancy evaluation, one interviewee brought up the example of a Restrictive Declaration at the local New York City level. The Restrictive Declaration is a condition tied to a property in exchange for "certain special permits and some zoning changes" that can accommodate specialized conditions.[169] The agreement is tied to the property as a covenant, binding all current and future owners to fulfill the conditions of the agreement.[170] The restrictive declarations might come into play in a variety of situations, including environmental remediation, public space access, or passageway access. In the case of an agreement concerning a landmark building, the agreement would include the Landmarks Preservation Commission (LPC). One interviewee offered the example of an Approved Permanent Passageway permitted through a restrictive declaration agreement between the New York City Department of City Planning (NYCDCP) and the Landmarks Preservation Commission (LPC). The agreement requires the building owner to commission a follow-up report every 5 years on the property in question to ensure that there is ongoing maintenance of landmarked features of the building, both interior and exterior. The agreement is enforced by the Department of Buildings (DOB). If conditions of the agreement are not met—for instance, a conditions report reveals that maintenance is insufficient—the negligence would amount to an LPC violation.[171] Building owners enlist architects to evaluate the building condition and submit reports. Outside of the Restrictive Declaration

168 "Benchmarking."

169 Department of City Planning, "Zoning Handbook," 207.

170 Kayden, Privately Owned Public Space, 168.

171 Architect #1, in conversation with the author. In the example of the Henry Bendel building, LPC acted as the applicant to the DCP to allow a through-block passage instead of a set-back. The result is that the architect has performed follow-up inspections every 5 years since 1995.

policy, interviewees reported no other circumstances where government incentivized, required, or otherwise encouraged post-occupancy evaluation.

While post-occupancy evaluation is not common amongst private clients, institutional clients and public clients pursue post-occupancy evaluation as a means to support long-term stewardship and accountability. In select circumstances, policy may require that private clients comply with limited POE, as with the New York City Restrictive Declaration and Local Law 84.

Architects and Post-Occupancy Evaluation

While certain clients purse POE, interviewees reported that they were generally not engaged to carry out POE on behalf of clients. Nor did interviewees typically undertake any kind of formal post-occupancy evaluation of their own volition. Those who did pursue formal POE focused their efforts primarily on building performance data. However, all interviewees discussed a variety of informal post-occupancy interactions, often focusing on qualitative data related to usage and occupancy.

For those architects that had experience with formal POE, the commonly-cited metrics coalesce in several main categories: operational energy, user comfort, functional or program-based metrics, occupancy data, and material durability. One interviewee with extensive experience in post-occupancy evaluation focused outcomes evaluation on sustainability, operational energy, thermal comfort, and material performance. The interviewee described a POE process that involves observation, analysis of building data, and user feedback, as well as analysis of each data set relative to the others. The first step of the process involves a simple visual inspection: "...you're looking for really basic stuff like collapsed vents, dampers not in the right positions, sometimes fairly obvious things."[172] The second step involves leveraging building users and their experience of the building to identify potential issues: "...we like to ... understand how people feel in the space and a lot of times that's the easiest thing to do. You know, are people comfortable or not across a broad variety of metrics. Light levels, temperature, humidity... And that data is relatively easy to collect and usually it's extremely accurate, people aren't going to lie to you."[173] The firm supports and streamlines this work through specialty software. The final step zeroes in on specific issues: "And that might involve installing ad hoc sensor networks and sometimes that might involve reviewing existing building data: are the schedules operating the way they're supposed to, are the set points correct given what people are saying. There's an interplay between those factors, sort of like a walk-through looking for obvious things, there's the data coming off the building itself, and then there's the people. I think the only other piece I'd throw in there is matching the building meter data, performance data, with energy model data and this we don't do that regularly but when we do do that, we find pretty high value there."[174] The interviewee and their team also tests materials to build a database of knowledge around material durability and performance. Through all evaluations, the most useful data to them is "highly actionable data."[175] This comment underlines the foundation of post-occupancy evaluation literature, which upholds POE as a critical tool for improving design decision-making.

As mentioned above, interviewees rarely carry out any kind of formal post-occupancy evaluation, despite broad recognition of the value of post-occupancy evaluation. "It's kind of crazy because there's so much emphasis on [POE] and on data collection in general for our understanding and certainly the American Institute of Architects emphasizes it and LEED emphasizes ... post-occupancy analysis in some instances. But it's not something that happens for us very often."[176] However, interviewees reported other forms of post-occupancy contact with projects, including informal POE and maintenance planning. Six out of seven interviewees responded that they carried out formal post-occupancy evaluation on 0-10% of projects. However, all interviewees reported some form of informal post-occupancy evaluation. Informal POE is just that—an informal opportunity to revisit a project or reconnect with a client, for example, allowing the architect to learn something about the post-occupancy life of the project through in-person site observation or collection of anecdotal experiences. Interviewees considered a wide variety of topics in these informal POEs, focusing on occupancy and usage, program functionality, and material wear.

While informal POE is not scientific and not designed to be generalizable, interviews reveal that there is value to architects in informal POE. One interviewee pointed out the difficulty of measuring something like program functionality formally, as well as the value of informal, anecdotal information:

172 Architect #7, in conversation with the author.
173 Architect #7.
174 Architect #7.
175 Architect #7.
176 Architect #4, in conversation with the author.

> It's kind of hard to evaluate if people like [the building]. There are metrics that nobody ever uses for performance for a design. If you're designing a business, for instance, have you reduced absenteeism, have you increased staff retention, and so on. Those are very hard things to evaluate because it's very hard to do it scientifically with a control in the experiment. So you could never measure it against something else. It's all anecdotal, but anecdotes are useful![177]

Anecdotes related to use and occupancy, both expected and unexpected, peppered the interviews. Through interactions with repeat clients, and opportunities to re-visit projects, interviewees sought to discover if occupants used the space as intended or imagined. "We look for is it being used the way we imagined it would be used. Are people enjoying it? Is the life of the building really there?"[178] One interviewee shared stories of people occupying projects in ways that were better than intended. For instance, site visits to a completed public park revealed that older adults practiced tai chi in one area and children transformed another area into an ad hoc playground.[179] The process of uncovering this usage data and programmatic success happens casually through direct contact with users and former clients : "... what matters to us when we go back and look at projects, and this is more informal, is testimony—talking to people who use the space, people who might have been in our original client group, and hearing from them what's working and what isn't. Hearing from them what's successful and what they love about the space, what interiors people are using the most and for what reason... but it's all through conversation."[180]

Informal observation of material durability, and a number of building performance data points, comprise knowledge learned in practice. Architect #2, for instance, reports material wear and replacement as a key concern for the practice that is not formally recorded after site visits, but filed away as accrued experience. In another case, Architect #7 shared the firm's anecdotal observations of green roof success over time. The architect observed that green roofs may or may not succeed, with plants perhaps growing rampantly or barely surviving. Plant health in green roofs is "not traditional building metrics, but it's certainly part of building performance."[181] Informal building performance evaluation might also involve tapping into existing data, like energy bills and water usage.[182] These observations of material and building performance comprise valuable professional experience, but differ in generalizability from the formal POE discussed at the start of this section, which constitutes rigorous analytical study.

Informal evaluation also includes reflection on lessons-learned throughout design and construction. The thoroughness and cohesiveness of lessons-learned assessment varies by firm and project, due to firm organizational strategies and cost of lessons-learned assessment, among other reasons. This form of informal post-occupancy evaluation, does not directly deal with the building as a product, and instead addresses process and practice. Interviewees stress the educational value of lessons-learned assessment for themselves and for employees, for the accumulation of personal knowledge (which can be very specific) in service of improved outcomes in the next project, and for improved workflow internally and with consultants.[183]

Interviewees report interest and recognize value in POE, but only one interviewee really engages with formal POE. This person focuses efforts on building performance data. However, all interviewees have pursued informal POE, with focus on qualitative date related to occupancy and usage, as well as knowledge accumulation for improved practice.

Maintenance Plans

Maintenance offers an additional form of post-occupancy phase engagement with built projects. While maintenance is not post-occupancy evaluation, it addresses anticipated physical maintenance concerns. Stated processes surrounding maintenance plans provide insight into the client and/or architect attitude towards long-term building care, as well as intended

177 Architect #5, in conversation with the author.
178 Architect #6, in conversation with the author.
179 Architect #3, in conversation with the author.
180 Architect #4, in conversation with the author. Example of organizational strategies at Brown study center.
181 Architect #7, in conversation with the author.
182 Architect #4, in conversation with the author.
183 Architect #5, in conversation with the author; Marcus and Francis, People Places: Design Guidelines for Urban Open Space; Architect #7, in conversation with the author.

durability outcomes. The maintenance plan is conceived before building completion and may be considered to varying degrees in design decision-making.

Interview data demonstrates that maintenance plans are not part of regular practice. Only one interviewee typically suggests a maintenance plan and five interviewees stated that clients usually do not request a plan. If clients request a maintenance plan, interviewees reported that the request occurs towards the end of a project in Construction Documents (CD) or Construction Administration (CA) phases.[184] Client interest in maintenance plans aligns closely with interest in post-occupancy evaluation. Private clients, particularly private residential clients, and non-profit clients generally do not request maintenance plans.[185] As with POE, institutional and public clients are more concerned with long-term maintenance. However, according to interview data, maintenance is not generally as central for public clients as for institutional clients. Public clients will request a maintenance plan, but perhaps closer to the end of the project.[186] On the other hand, institutional clients are more likely than private or public clients to request a maintenance plan. If they do not, they likely have systems in place to handle maintenance information contained in close-out documents.[187] One interviewee shared that the institutional client group will often include an advocate or representative for maintenance: "...in a lot of our projects, the larger ones, there is someone who represents maintenance and that is the lens that they have, and that questions and aspects of maintenance, and that plan, will have to be front and center throughout the project."[188]

In addition to institutional clients, maintenance is also more likely to be front of mind for high rise and historic projects. In high-rise projects and historic projects architects will coordinate consultants to create a maintenance plan, but they do not take the lead on creating the maintenance plan.[189] Those firms with enough preservation experience to forgo a consultant are more inclined to suggest a maintenance plan, "usually later in the process."[190] There is a recognition in preservation architecture and conservation practices that building maintenance is critical to ensure longevity of restoration work. One interviewee with extensive historic preservation experience stated: "The real statement is that buildings don't last forever, and you need to keep them up and repaint. We usually look for semi-annual inspections and things [of that nature]."[191] However, interviews revealed that this kind long-term maintenance thinking is not consistent across practices working in adaptive reuse.

Maintenance plans, while not post-occupancy evaluation, offer insight into how different architects, client types, and building typologies relate to building care in the post-occupancy phase of the project. The maintenance plan, in summary, aligns with general trends in post-occupancy considerations. Institutional clients, and, to a lesser extent, public clients, bring a long-term perspective to projects. Perhaps by the nature of their work addressing past maintenance and material performance issues, those architects and consultants engaged with historic preservation think about maintenance concerns.

Takeaways

Institutional and government clients have demonstrated the greatest interest and dedication to post-occupancy evaluation. These clients view post-occupancy evaluation as a tool for facilitating long-term maintenance, construction, and property management. For government, specifically, the accountability to tax payers makes post-occupancy evaluation a useful strategy for proving and improving financial responsibility. While certain clients may purse POE, as a general rule, architects are not involved in formal post-occupancy evaluation. One interviewee has extensive POE experience, focusing on quantitative data collection related to building performance. However, all interviewees reported varying amounts and types of informal post-occupancy evaluation. This type of informal evaluation offers opportunities to engage with qualitative project outcomes and to gain professional experience, facilitated by opportunities to do additional projects for the same client or informal contact with the client or project. Maintenance plans, while not fully situated in post-occupancy phase work, offer insight into the relationships between architects, clients, and long-term building considerations. While POE is not commonplace amongst clients or architects, it is most common amongst those clients with long-term stewardship or accountability concerns,

184 Architect #6, in conversation with the author.
185 Architect #6; Architect #4, in conversation with the author.
186 Architect #6, in conversation with the author.
187 Architect #4, in conversation with the author.
188 Architect #7, in conversation with the author.
189 Architect #3, in conversation with the author.
190 Architect #1, in conversation with the author.
191 Architect #1.

including those projects that involve historic buildings.

Chapter 6

Findings & Analysis

From the GSA documentation of real, post-occupancy energy data, to Gehl's Splash Pad in Lexington, KY as a strategy for assessing the social impact of a design proposal, to interviewees discussing their work on historic buildings, the research investigates myriad paradigms of architectural practice. Through a mixed methodology of literature review, comparative practice analysis, and interviews with practicing architects, the thesis research seeks to inform architectural practice in relationship to the historic built environment and social outcomes. Research questions are restated below:

1. How do practitioners evaluate project success?
2. What social outcomes do practitioners seek in adaptive reuse projects?
3. What are the opportunities, obstacles, and recommendations for architects to establish frameworks for capturing social outcomes of intervention in the existing built environment?

The research inquiries resulted in data comparing practices that consider social values, social metrics, and qualitative outcomes, analysis of literature on post-occupancy evaluation (POE), and interview data covering architects' perspectives, beliefs, and professional practices in intention-setting, design, and post-occupancy phase work. Major findings of this research and analysis include:

- Certain client types—primarily institutional and government—and academic research most commonly carryout post-occupancy evaluation. Certain architectural practices pursue POE for specific goals—primarily those related to building performance. However, interview data confirms the scholarly and guidance literature in the position that POE is not common practice in architecture. In fact, qualitative post-occupancy evaluation—as a broad framework for social outcomes evaluation—is particularly scant.
- Preservation intention establishes project goals, which in turn support outcomes metrics. Intention is a triangulation of preservationist, client, and architect intentions. While client and preservationist (loosely represented through preservation policy) present strong positions in the negotiation for establishing intention, the data shows that architects can and do frame intention through expertise.
- Perceptions of what constitutes social benefit among interviewees differ from definitions of social benefit in the literature. The lack of clarity about the meaning of social benefit impedes development of adequate metrics and methods for evaluating—and even discussing—social outcomes.

Barriers to Post-Occupancy Evaluation

Scholarly research on post-occupancy evaluation enumerates the methodologies, methods, findings, and benefits of POE as an evidence-based feedback mechanism to assess design outcomes. Advocates argue that, in turn, rigorous, generalizable post-occupancy evaluation data can inform improved design decision-making, products, and outcomes—more

so than informal lessons-learned experience. However, despite the possibilities of POE, the interview data and critical review of literature finds that post-occupancy evaluation is not common practice amongst architects. A small minority of interviewees—and according to the literature, a small minority of architects—undertake post-occupancy evaluations for their own purposes, such as one interviewee with a specialty in building performance evaluation. More commonly, certain clients, primarily in the public or institutional sector, carry out their own POE without architect involvement. Alternatively, the literature indicates that POE may occur through academic research.

The barriers to POE are plentiful, and include both obvious and more nuanced challenges, such as insufficient funding and underdeveloped architect expertise. However, through the lens of comparison of practices referenced in Chapter 3 and interview data, it is clear that there are opportunities for expanding post-occupancy practice.

Funding poses an obvious challenge to completing post-occupancy evaluation services. As it is, many firms end up losing money on construction administration due to the discrepancies between fee structuring and time required for that phase of work.[192] The funding required even to carry out a relatively straightforward evaluation would strain many small firms, and a comprehensive post-occupancy study could run hundreds of thousands of dollars—a price many clients are unwilling to pay.[193] "Why would a client pay more to check your work when they're already paying for the best of the best?"[194] The problem of who will pay for post-occupancy evaluation of any kind, including social outcomes assessment, haunts the background of any conversation about POE.

The specter of post-occupancy evaluation could offer an opportunity for architects to educate clients about its value as a tool for formalizing feedback to address issues promptly and efficiently, improve the building over time, and learn from it for future projects. Chapter 4 establishes that architects can and often do use their expertise to shape design intention and priorities. Interviews suggest that architects feel they can shape the conversation with clients if only they have the expertise.[195] However, Chapter 5 confirms a common theme from the literature: that most interviewees, and most architects in general, lack the expertise to provide post-occupancy evaluation services for their clients. Most interviewees had limited experience with post-occupancy evaluation in general, and felt they could not sufficiently lead the conversation with the client, or carry out the work of evaluation. "Sometimes academic clients will do it independently, but it is not something that most clients ask for and it's not something that we are pushing for as a scope for clients to think about," but we will be shifting that as we work to figure out "how to be better leaders of the conversation with our client."[196]

Post-occupancy evaluation is not part of traditional architectural education. Architecture pedagogy has been written about extensively, so the thesis will address architectural education here briefly. From a practical perspective, most architecture degree programs must comply with accreditation standards – the NAAB in North America—which establishes criteria for student learning. Masri sums up the criteria as: "critical thinking and representation; integrated buildings practices, technical skills, and knowledge; professional practice; and integrated architectural solutions."[197] Likewise, the UIA advocates for a wide variety of skills including technical, social environmental, professional and design skills. Of interest to this thesis, is the concept espoused in accreditation organizations that social value—and in the case of UIA, that building evaluation—ought to be taught in architecture programs. Design studio, as centerpiece of the curriculum, is expected to integrate all aspects of architectural education (as enumerated by accreditation organizations). However, Masri and others point out the misalignment between expectation and reality. Furthermore, architectural research does not comprise a single "method of practice." As Rendell distills, architectural research brings together research methodologies from science, social science, humanities, and practice-led research, like art and design, in service of the subject of architecture.[198] Rendell proposes that research questions, methodologies, and context intersect to produce a specific kind of knowledge. While not necessarily true across all programs in all places, these general conditions of architectural education frame the profession. Due to the pressure of curricular expectation, and the sheer amount to learn as a young architect, much training occurs on the job. Therefore, if educational institutions do not teach POE, and if practicing architects are not doing POE, young architects will likely not learn POE.

Funding and education obstruct an architect's ability to carry out POE. However, as discussed in Chapter 5, just because architects don't often provide POE services, does not mean it is not happening. Prevalence of POE practice amongst

192 Architect #5, in conversation with the author.
193 Hosey, "Why Architects Should Embrace Post-Occupancy Evaluations."
194 Architect #9, in conversation with the author.
195 "Architectural Research - AIA."
196 Architect #4, in conversation with the author.
197 Saridar Masri, "Improving Architectural Pedagogy toward Better Archistructural Design Values," 118–99.
198 Rendell, "Architectural Research and Disciplinarity," 142.

institutional clients speaks to protocols established by institutions and institutional investment in stewardship, long-term care, maintenance, and performance of facilities.[199] While academics, private clients, and non-profit clients may carry out POE occasionally, as recorded in the literature, interview data, literature, and socially-committed practices suggest that post-occupancy evaluation is client-driven. Even in firms that prioritize social impacts and consistently work with clients to develop metrics, the post-occupancy evaluation process rests with clients and partner organizations. Firms discussed in Chapter 3, such as MASS Design Group, support clients and partner organizations with expertise during the post-occupancy evaluation phase, providing a framework for the partner organization to fill out with data. Maintenance plans, while not strictly POE, also highlight the relationship many architects have with a project—often serving a supporting role in the post-occupancy phase while the client maintains the building. The client-driven nature of POE, as it is now, means that architects will not often touch that part of the practice—and therefore may not have access to POE data. POE data collection may be done in-house by facilities teams at institutions, but may never be shared with the architect. For instance, museums collect visitor data, libraries collect usage data (books borrowed, event attendance), universities may collect maintenance data, etc. but if that data does not reach architects, it cannot inform future projects. In any of these client-driving POE contexts, as explored in Chapter 2, the evaluations fundamentally revolve around assessing if, and to what extent, a building has achieved a stated goal. In the example of MASS Design Group, mentioned above, the firm assesses if the goals set in the visioning process were achieved – often mission-oriented, programmatic goals.[200] However, in the case of a historic building adaptive reuse project, the common thread between projects is not programmatic. Instead, the historic nature of the building is the connecting thread, much in the same way projects focused on sustainability share certain characteristics. In adaptive reuse projects, as established in previous chapters, the historic building as common thread means that the outcomes metrics for adaptive reuse might involve a more standardized set of questions than the mission-oriented outcomes metrics discussed above. As with sustainability-oriented projects, in which the target is fairly standardized (lower energy consumption, lower embodied energy) and can apply across a wide variety of project, adaptive reuse projects might involve targets across all historic projects.

Post-occupancy evaluation practice serves as a broad framework for assessment of social outcomes. Built into this study of post-occupancy evaluation is an assumption that social outcomes assessment might share methods, metrics, or project process frameworks with general POE. Because POE can and does exist without architect involvement, the follow-up question is: if architects understand the value of POE, and (according to Chapter 4) are in a position to influence the project intention and goals, how can architects propel POE? How can architects expand POE to include social outcomes?

Social Outcomes Metrics and Data Capture Methods

As discussed in Chapter 3, there are practices, such as certain preservation practices, public space designers, and architects engaged in community-based projects, that center social context and outcomes. However, interview data—as related in Chapter 4—and a review of the literature—reviewed conceptually in Chapter 1—reveal that architects possess varying perceptions of what constitutes social benefit—and those perceptions differ from descriptions of social benefit offered in the literature. Literature from architecture, historic preservation, and planning, talk about social benefit somewhat differently, further exacerbating difficulties in measuring social outcomes. Ultimately, the utility in studying perception of social benefit is the potential to turn perceptions into useful social outcomes metrics and data.

"Social" is an open-ended term, challenging to define. The dictionary definition of social, stated in Chapter 1, emphasizes connection and "welfare" of individuals in relation to a group or "human society" at large.[201] Interviews give insight into how the interviewees, as practitioners, conceive of social benefit in their professional experience. Interviewees talked about architecture that offers social benefit in three general ways: publicly-accessible projects, such as a library or park; projects that serve community needs, such as schools or social housing; and literal design components that offer accessibility, be it through physical accessibility by way of ADA compliance, or visual accessibility by way of clear glazing or some other design strategy. Therefore, interviewees tie social intent to program and/or client. Interviewees are not incorrect to perceive social benefit as such. The practices discussed in Chapter 3 typically work with public or otherwise public-serving clients, or public-facing programs, automatically aligning the projects with a public or social benefit. This said, several interviewees viewed the term

199 Shibley and Schneekloth, "Evaluation as Placemaking: Motivations, Methods, and Knowledges"; Architect #7, in conversation with the author.

200 "Purpose Built: Designing for Impact"; "Purpose Built: Charting Capital Results."

201 Miriam-Webster, definition 3. https://www.merriam-webster.com/dictionary/social

"social benefit" even more expansively, suggesting that sustainability, light, air, and other qualities of healthful space benefit society and/or benefit building users. These arguments certainly align with public policy: the GSA connects sustainability, healthy workplaces (with lots of daylight, low-VOC materials, and other elements), worker productivity, and social connection in building projects, based on data collected in their buildings.

However, the perceptions of social benefit amongst interviewees differ from perceptions of social benefit expressed in the literature. The literature shows that the profession broadly believes that design can improve quality of life.[202] Both the academic literature and guidance documents from professional organizations implicitly and explicitly express the belief that good design inherently "[improves] equity and quality of life for all."[203] The numerous perceptions of social benefit collected through architect interviews, the literature, and guidance documents underlines the openness of the term "social." However, all of these perceptions share an emphasis on the physical component of a building—such as physical accessibility, visual accessibility or particular building features—which may speak to an architect's training and professional concern with physical design considerations. But the social is not entirely physical or even visible, leading to the conclusion that the architecture field lacks the language to discuss social outcomes of adaptive reuse.

With regard to social outcomes in the historic built environment specifically, some interviewees expressed the view that preserving a historic structure is inherently a public benefit. As discussed in previous chapters, preservation policy sets up an expectation of public benefit, so the concept that preservation is a social benefit grows from this policy expectation. The National Historic Preservation Act states: "the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans."[204] Likewise, the New York City Administrative Code declares the value of preservation to public welfare, stating that preservation is "a public necessity and is required in the interest of the health, prosperity, safety and welfare of the people."[205] (Note the use of "welfare" in both the preservation policy and dictionary definition of "social.") The definitions and metrics of social benefit expressed in preservation literature see positive community impact as a key part of historic preservation work, using terms like social inclusion and collective memory to drive these discussions. This is an approach to social benefit that prioritizes people and community—mining the value people ascribe to a building or site, derived from collective memory and cultural narratives. A review of relevant literature resulted in key terms to describe social benefit: community participation, personal connection, and distribution of benefits. These phrases offer a loose list of terms that can begin to describe social outcomes in the historic built environment.

On the other hand, some practitioners, like those discussed in Chapter 3, offer fairly clear metrics of social outcomes. Chapter 3 establishes that practices invested in social benefit offer more robust strategies for defining social benefit. Gehl, for instance, uses contextual, project-specific metrics to determine what constitutes social benefit (and success). While metrics vary by project, the following questions serve as examples of the types of questions asked of outcomes:

- Is this space really serving the diverse communities that may live in this neighborhood or that potentially should be seen within the catchment area? And why or why not?
- Is the site serving a diversity of communities?
- Is the site fostering some kind of engagement or connection (passive or active) among people, or in a place?

It is important to emphasize the project-specific nature of metrics used in Gehl projects, and in other comparison practices. The values associated with historic sites, and current and past social contexts are project-specific efforts, therefore the exact social outcomes metrics vary from project to project. However, Chapter 3 establishes that certain socially-committed practices arrive at outcomes metrics through a similar pre-design phase process, starting with establishing baseline socio-cultural context. Chapter 3 examines practices from select preservation and architecture practices that draw from a variety of allied fields, as well as urban planning and design practices. The strong reliance on allied fields signals that fields like urban planning might have a clearer sense of what constitutes social benefit and/or better methods for collecting social context and

202 Feldman et al., "Wisdom From the Field: Public Interest Architecture in Practice."
203 "Engaging Community - AIA."
204 National Historic Preservation Act of 1966 (16USC470). Emphasis added.
205 NYC Administrative Code.

outcomes data.

One difficulty in defining the social rests in the question of scale and scope. The public space designers examined in Chapter 3 express that public space—a public plaza, for instance—provides a place for society to intersect and mix, but the social impact of that place extends beyond the site. The designers make an argument that the site impacts the social. The AIA, for instance, argues for the impactful role an architect—through design work—can play in a social context. However, this raises the question: how far does the social impact extend? Is it appropriate to measure outcomes only at the site?

Interviewees grappled with this question, as well. Interviewees agreed that the social extends beyond the site. However, neighborhood or larger-scale urban shifts cannot be assumed to emanate from a given project, according to interviewees. Instead, they attribute such shifts to urban planning and/or real estate actors. Adaptive reuse, in particular, brings up questions about its catalyzing effects in neighborhood, cultural, and societal shifts. The perspective shared by interviewees is that the architect is a participant, but not a catalyst, in urban-scale impacts of adaptive reuse. Interviewees suggest that by the time architects are involved in a project, neighborhood change has already started.[206] Architect #6 stated: "This is the thing about adaptive reuse: often it's done in a neighborhood and then the neighborhood changes, right? It's hard to tell what comes first... In general, if you're an architect and you're invited to do something somewhere, it's going to change. I don't think it's because architecture happens that a neighborhood goes, I think it's already on its way."[207] It is tempting to ask: what is the role of the architect in social impact? However, knowing the importance of context to the social, it is valuable to question the scale of the social. Research on social capital identifies that people form social connections based in geography and voluntary interests (like religion or work).[208] Lisa Alexander corroborates the notion of different qualities and scales of social connection, emphasizing the importance of "microlevel cultural dynamics."[209] Therefore, one might instead ask: what is the past, current, and future role of the site (upon which the architect is operating) in the various social networks that may or may not occupy the site?

The perception amongst interviewees of disconnection between architect and urban impacts hinders collection of social outcomes data, further obscuring the relationship between architect and adaptive reuse, and urban impacts. One cannot say that architects (or for that matter preservation policies) do or do not have a catalyzing role without data. "... it's not like I could say, 'We did a theater here and now there's new retail popping up on the block.' But there is absolutely intentionality about the impact of a renovated building on its site and its context..."[210] This comment points to the difficulty in isolating impact of a single adaptively reused building within a broader urban context. For instance, Architect #5 points out the particular challenges to distinguishing impact of a single adaptive reuse project from impacts of historic district designation. Architect #5 speaks to this when discussing a school project in Brooklyn Heights: "In terms of the neighborhood, a lot of the historic projects we've done have been in historic districts. So the neighborhoods don't change... "[211]

The literature also grapples with the complexity and uncertainty of impacts of adaptive reuse on urban context.[212] Ultimately, collecting data on project impacts would aid in better understanding the type and scale of impact of adaptive reuse projects. However, comparative practices and POE literature elucidate the importance of clear metrics of evaluation established at the outset of a project. As demonstrated in this section, interviewees believe social benefit to be strongly tied to client and program, as well as physical manifestations of accessibility and publicness. This perception differs from that expressed in the literature, that expressed in preservation literature and policies, and that expressed in comparative practices from allied fields. The confusion and misalignment of what constitutes social benefit hinders any clear set of social outcomes metrics for adaptive reuse.

Confused and absent metrics hinder the existing difficulties in post-occupancy evaluation, as discussed in the previous section. Interviewees spoke confidently about their interest in energy, occupancy, material durability, and system durability outcomes data; while few mentioned social outcomes data as a desired type of outcomes data. That type of qualitative data is seen as too challenging to collect without expertise in community engagement. Interviewees had limited knowledge about evaluation of social outcomes—and none had undertaken such work. "I think it's very difficult for us in our practice right now to

206 Architect #2, in conversation with the author; Architect #4, in conversation with the author; Architect #6, in conversation with the author.
207 Architect #6, in conversation with the author.
208 Sander and Lowney, "Social Capital Building Toolkit."
209 Alexander, "Hip-Hop and Housing: Revisiting Culture, Urban Space, Power, and Law," 853.
210 Architect #4, in conversation with the author.
211 Architect #5, in conversation with the author.
212 Ryberg-Webster and Kinahan, "Historic Preservation and Urban Revitalization in the Twenty-First Century - Stephanie Ryberg-Webster, Kelly L. Kinahan, 2014."

know the broader impact, socially, of projects. ... it's not territory that I'm super versed in."[213] That said, as established in Chapter 5, most interviewees share stories of collecting qualitative outcomes data informally. It is possible that interviewees see informal POE as offering valuable data while circumventing the difficulties in collecting qualitative social outcomes data formally. While anecdotal tales can form the bedrock of an experienced career, the informal data is not generalizable. In adaptive reuse projects, which (as discussed in the previous section) share the commonality of a historic building, there is a possibility to share outcomes metrics, there would be real advantages to collecting generalizable data.

The perceptions interviewees offered of what constitutes social benefit, the various descriptions offered in the literature, the contextual and project-specific metrics developed in select practices, the challenge of determining scope of social outcomes in at an urban scale, and the consequent challenges to developing clear social outcomes metrics raise further questions about the most appropriate process for defining social outcomes metrics and the most effective methods for social outcomes evaluation.

Intention-setting

Setting intention—the underlying rationale for what is preserved and how it is preserved—in the historic built environment is a critical moment in a project. Chapter 4 establishes that preservation intention comes from triangulation of architect, preservationist, and client intentions. The interviewees spoke about client intentions as paramount. As such, interviewees framed treatment of historic fabric in designs as a strategy for meeting program, budget, schedule, and other client-established project goals. In essence, all interviewees spatialize the historic value according to the historic fabric's utility in achieving client intentions—leveraging the "good bones" of a historic building in service of client goals. While preservationist intentions—discussed in the thesis through the proxy of preservation policy—came up only occasionally in interviews, interviewees all reported consulting the federal and local designation documents in historic research. As Schuster and de Monchaux explain, the designation documents are themselves a form of preservation policy. The designation documents result from a process of research into historic, cultural, and architectural qualities of a site, leading to a document that cites the specific character-defining features that merit preservation. Interviews revealed the ubiquity and importance of designation documents in architectural practice as a primary resource for historic research. This points to the engrained influence of preservationists on the historic built environment. The architect, meanwhile, negotiates the intersection of client intention and preservationist intention. Chapter 4 argues that, at this intersection of client intention and preservationist intention (loosely via policy), the architect is in a critical position to shift the particulars of what is preserved and how, thus even negotiating preservation intention. Chapter 4 argues that architects with in-house preservation expertise can negotiate the way preservation intention gets interpreted in the project. Whereas those without preservation expertise, in particular, utilize the property's designation document as a key resource in understanding the site's significance.

It is worth nothing that while regulations, incentives, and other preservation policy tools occupy great concern in this thesis and came up several times in interviews, building code or zoning codes did not come up at all. No interviewees selected "Building code" as a primary design decision-making factor from the multiple-choice list provided in interviews. (In fact, several Interviewees dismissed it immediately—how could this be a primary concern in design?). However, academic research shows that building codes can have an enormous impact on the design decision-making, as evidenced by the preponderance of "wedding cake" towers in New York City, for instance.[214] However, the perception that zoning and building codes do not influence design decision-making may speak to familiarity and facility with codes. Unlike preservation regulations, which are specialized knowledge, all architects must develop a certain familiarity with building codes regardless of project type, location, client, etc.

If, as discussed in Chapter 4, architects are in a position to influence project preservation intentions, and architect expertise is the primary driver of an architect's ability to effectively influence project intentions, then one could conclude that architects could influence intention relative to social outcomes if equipped with adequate expertise. Interviewees expressed interest in social outcomes of adaptive reuse, and the claims of social benefit in the literature and guidance documents certainly underline an aspiration in the field for architecture to produce social benefit. Therefore, even with moderate expertise in social outcomes, a few interviewees shared examples of efforts to include social outcomes considerations in their

213 Architect #4, in conversation with the author.

214 Rustow, "The Tragic Poetry of Building Codes."

interpretation of the designation documents and broader preservation strategy. One interviewee spoke about interpreting a statement of significance to include community perceptions of the historic building: "We read the Landmarks report, get [consultants] feedback. And it's also our own view of the building: what do people love about it? What can we use and really leverage to make the space special?"[215] The reference to a non-expert public speaks to acknowledgment that non-expert voices have a role in determining preservation intention and a desire (and ability) to engage other methods of spatializing value that engage a social dimension.

Takeaways

This thesis contributes an analysis of the state of post-occupancy evaluation practice, social outcomes as perceived by practitioners (specifically, a small group of architects working in historic contexts) and as discussed in literature, and analysis of the opportunity for architects to participate in setting preservation intention. Challenges to widespread social outcomes evaluation stems from differing perceptions in what constitutes social benefit. Perceptions amongst interviewees differ from the literature, and perceptions differ amongst the literature of architecture, preservation, and allied fields. As established in Chapter 4, architects have a role to pay in setting preservation intention, and this same role could extend to setting social outcomes intentions—with adequate expertise. Setting outcomes goals is a prerequisite for evaluating outcomes. Architects understand the value that post-occupancy evaluation offers, but lack of funding, expertise, and client-driven POE prevent architects from having a greater role in POE. Differing perceptions of social benefit is a challenge that trickles down to exacerbate other difficulties in promoting social outcomes evaluation at the critical stages of intention-setting and post-occupancy evaluation. These challenges raise a series of questions about how to address these issues. How should the field define social benefit? Where should social outcomes goals fit in with other project goals? How can architects propel or otherwise expand POE practice? However, differing perceptions of social benefit and alternate modes of practice in allied fields offer opportunities for honing a clear conception of social benefit of adaptive reuse. While there may be challenges to carrying out post-occupancy evaluation, establishing clear social outcomes metrics, and impacting intention-setting, each challenge presents opportunities for shifting paradigms of architectural practice. The next chapter will examine in greater depth the questions raised through this thesis and recommendations for improving social outcomes evaluation of adaptive reuse.

215 Architect #3, in conversation with the author.

Chapter 7
Conclusions and Recommendations

The findings summarized and analyzed in Chapter 6 raise a host of new questions and open up additional avenues for further research. Questions raised through the thesis research imagine actionable outcomes of the research, asking how the research findings can inform shifts in architectural education, how social outcomes metrics should be established, and how to negotiate divergent priorities in intention-setting. Architectural education, occurring over the length of a career, offers a critical meeting point for the field. The thesis has identified several deficits in educational offerings, and the proposed solutions seek to provide the tools for architects to carry out POE, assess social context and social outcomes, and grapple with historic research. Findings confirm and reveal challenges to establishing clear social outcomes metrics and methods of evaluation for social outcomes of adaptive reuse. At the core of this challenge is the complexity of the social, certainly, but also a foundational question of methodology: should social outcomes metrics of adaptive reuse apply universally across all project, or should there be project-specific metrics? The existing system of preservation policy offers a framework for evaluating specific project context and values within codification. This potential opportunity and frameworks shifts the focus to preservation policy. While the thesis may ultimately raise more questions than it answers, further research provides an opportunity to grapple with them. In particular, conclusions and questions point to an underlying tension between a systemic versus a project-based approach to establishing metrics and evaluating social outcomes.

Education

Barriers to evaluating social outcomes lead in part back to priorities in architectural education. As discussed in Chapter 6, architecture is a multidisciplinary field that brings together research methodologies from other fields. As such, architectural education is charged with teaching design and representation, technical, professional, historical, environmental, and other skills. The multidisciplinarity is both a challenge and an asset, in terms of the specific ways that architectural education could support social outcomes assessment of adaptive reuse in practice. As discussed in the previous chapter, differing perceptions of what constitutes social benefit, lack of expertise in post-occupancy evaluation, and lack of expertise in historic preservation research ultimately might be addressed in architectural education. How could architectural education shift to teach post-occupancy evaluation skills, historic research, and robust understanding of social outcomes in the historic built environment? What is the appropriate format for conveying this training?

Education—both formal schooling and informal education—has the potential to shift practice in several important ways regarding assessment of social outcomes of adaptive reuse. Architect education in Chapter 6 focused on formal undergraduate and graduate education. Based on the research around architecture pedagogy, shifts in institutional education would require a variety of considerations including shifts in criteria for evaluating student projects, the preeminence of the design studio, the types of research and role of research in pedagogy, and shifts in departmental divisions. That said, in the remainder of this chapter, architect education refers to the variety of formal and informal educational opportunities available to architects at various stages of their careers. These include: continuing education for licensed architects, informal educational opportunities at lectures, exhibitions, and other events, written and/or visual material, and firm- or practice-based learning (mentorship, lessons-learned) all present opportunities to achieve educational goals. While the individual merits of these educational opportunities for specific educational objectives are not within the scope of this thesis, it is worth noting that the lessons-learned aspect of practice-based/firm-led education came up in Chapter 5 as a form of informal POE. The architecture firm acts as an educational framework, providing direct project experience and mentorship: "... when you're

running an office, you're ultimately training people. That's most of what you do—training people to know how to do it."[216] Unfortunately, if firms seldom engage in post-occupancy evaluations, that form of knowledge is not taught to younger staff through in that professional setting.

In order to be able to lead conversations with clients and stakeholders, architects would need to become familiar with post-occupancy evaluation practice. Interviewees expressed widespread interest in post-occupancy evaluation, suggesting that informal education related to POE specifically would be well-received. How such subject matter would best be taught—by whom, to whom, etc—lies outside the realm of this thesis. However, if architects did develop knowledge of POE practice, they could then help to educate clients. As discussed in Chapter 3, architects can reframe preservation intention with adequate expertise—and the same could be true of post-occupancy evaluation. Developing client knowledge of POE would add further fuel to shifting practice towards an outcomes-based mindset. As one interviewee said, clients may not want to pay more to see if the thing they just paid for works. However, client education would need to focus on the near- and long-term benefits enumerated in the literature: the ability to make small adjustments as issues arise rather than requiring a costly follow-up project, the greater potency of lessons learned through POE (as opposed to informal lessons-learned) that can be applied to future projects, etc. As an advisor for the client, an architect is also in a position to share this information about the benefits of post-occupancy evaluation. Preiser and Hardy argue: "With a newly empowered clientele, a savvier cadre of practitioners, and the communication and production opportunities provided by a globally networked profession, the potential impacts on practice cannot be overstated."[217] However, while there may be limits to the effectiveness of client education, this thesis will not attempt to recommend a strategy for in inducing clients to support social outcomes evaluation beyond education. The mechanisms that might produce such a shift in client behavior could be a valuable topic of further research.

As discussed above, architects have the ability to reframe preservation intention. However, the data shows that reframing requires expertise in that area. Skills familiar to preservation professionals—ability to identify, locate, and interpret historic documents pertaining to the built environment—allow architects to negotiate preservation intention with the preservationist (as represented through preservation policy in this thesis). The recommendation is simply for architects to gain skillsets for this kind of historic research. As discussed in Chapter 4, the underlying intention to retain historic fabric does not shift in these negotiations. However, greater facility in historic research and preservation policy would grant architects greater capacity for reframing the project.

Likewise, knowledge of social outcomes in the historic built environment could help architects discuss social outcomes in the intention-setting phase. Because architects perceive social benefit in a variety of ways, it would be helpful to coalesce the field around a clear definition of social outcomes that aligns with that laid out in the literature. However, what would an education in social outcomes entail? Mabel Wilson points out the blindness of architects to "networked relationships," the social networks in which a building participates, in discussing social housing and its place in the urban fabric.[218] How could an educational framework identify assumptions about social benefit and the role of architects and preservationists in social outcomes, and discuss what social outcomes can mean in the context of adaptive reuse? This type of educational framework could provide architects with the language to discuss social outcomes of the historic built environment. Ultimately, the goal of this type of education is neither to blame or absolve architects for outcomes from adaptive reuse, rather empower and encourage architects to take on the task of better understanding social outcomes. Equipped with the skillsets to carry out POE, assess social context and social outcomes, and grapple with historic research, architects can respond and ultimately strengthen the field.

At the core of educational topics discussed above (language for discussing social outcomes, historic research skillsets, and practical knowledge of POE), is the modes of research in the field of architecture. As discussed in Chapter 6, architectural education brings together research methodologies from science, humanities, social science, and practice-led disciplines. Post-occupancy evaluation is a form of research. As examined in the literature, the exact methodology depends on the research question. For instance, material durability questions would likely employ a science-based research methodology. However, the practices discussed in Chapter 3 that address social metrics, employ various social sciences and practice-led methodologies. While architects would be familiar with practice-led methodologies, social science methodologies are not typically included in an architectural education. The recommendation to promote post-occupancy evaluation skillsets and social outcomes awareness through education ought to be paired with a shift in research practices, or at least an awareness of research practices, in architecture. As expressed in Chapter 6, architecture is unique in bringing together many different disciplines.

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216 Architect #5, in conversation with the author.

217 Preiser and Hardy, "Historical Review of Building Performance Evaluation."

218 Wilson, "The Multicultural City," 67.

However, the breadth of options results in a trade-off with depth of knowledge – broadly speaking—underscoring one of the strengths of the field, that of being generalists. The AIA advocates for architects to increase facility in research, in part to conduct their own research. "The AIA is committed to advancing research literacy in the profession. In order to do that in an impactful way, the commitment to research must extend from school all the way through practice and academic research. It is imperative that architects embrace research—both as critical consumers and, as warranted by interest and additional training, as researchers themselves. We will work to understand firm culture and provide guidance on how to adapt to changing integration of research into practice—however that is defined for a firm."[219] A shift in the way that architects and architecture students interact with research, and insofar as they see it as within their purview and gain facility with research methodologies, will support more robust architect engagement with general post-occupancy evaluation, historic research, and ultimately social outcomes evaluation.

Metrics + Methods

The findings and analysis discussed in Chapter 6 implies a goal of expanding or increasing social outcomes evaluation in practice. However, such a proposal presents additional questions about the appropriate metrics and methods. Chapter 6 raises questions about the possibility of defining metrics for something as complex and contextual as the social. Likewise, without clear metrics, identifying appropriate methods of data collection is futile. However, the questions about metrics and methods lead back to the fundamental question about methodology. A discussion of Becker's analysis of post-occupancy evaluation in Chapter 2 relates the advantages and disadvantages of two different general methodologies for evaluating outcomes: diagnostic and academic-based. The diagnostic methodology is essentially a case study methodology, while the academic-based requires a scientific methodology. Should POE be used as diagnostic tool, as Becker proposes, to hold each project accountable to its own standards of social outcomes? Or instead, should expanded POE seek generalizable data, applicable across project types with shared qualities?

Identifying appropriate metrics for social outcomes requires a clear understanding of social benefit. However, the findings distill a disconnection between how interviewees perceive social benefits, how the literature describes social benefit, and how certain socially-committed practices determine social benefit. While the research aims to examine paradigms of architectural practice in relation to the historic built environment and social outcomes, the findings raise additional questions about social outcomes metrics, including the appropriate scope and scale of social outcomes assessment. At this point, the obstacle of developing social outcomes metrics looms large. How do we develop metrics that ask (specific) questions about how the building impacts the social?

Socially-committed practices discussed in Chapter 3 establish social outcomes metrics through partnerships and community engagement resulting in contextual and project-specific metrics. These practices share a foundational belief that a project type (public space, education, healthcare, historic sites, etc.) provides social benefit, such that the specific benefits desired (metrics) come from the client or partner. What further research would advance solid recommendations of how one might set metrics? Is it even possible to establish standard social outcomes metrics when the underlying outcomes are highly project- and context-specific? Should or could there be generalizable social outcomes metrics?

The research concludes that education should increase the architects' abilities to engage with such questions, to neither take responsibility for the impact or absolve, but to encourage architects to take on the onus of catalyzing social outcomes data capture.

In considering further research and imagining scenarios in which metrics—whether systemic or project-specific—exist, this opens up questions about methods for capturing social outcomes data. Methods discussed in Chapters 2 and 3 range from technology-supported user surveys to audio-visual recorded observations, to carefully-calibrated interventions. Each method answers specific questions and provides certain kinds of data, so it is difficult to establish a specific method without a clear set of metrics.

Additionally, methods require actors: Who is most capable of establishing metrics and methods, and who should be involved in carrying out evaluations? What should be the role of an architect in setting social outcomes metrics and goals? The question of actors recalls the principal actors identified in Chapter 4. However, the architect, preservationist and client would

219 "Architectural Research - AIA."

all be considered "top-down" actors. An interviewee at Gehl raises the question of involving other stakeholders: those most familiar with the site, who are best equipped to understand impact. The effort to include user voices more democratically—seen across socially-committed practices—points to the difficulty in establishing neutrality and eliminating bias in assessing social outcomes: the degree to which a user feels benefits, personal connection, or inclusion in a process will vary depending on who you ask. For this reason, in assessing use of public spaces, "it is really helpful for the people who live in an area who know the space really well to be the ones doing the impact assessment. Because they can have a sense for the day to day activities and maybe more the life of a space than you might see if you're going in for a couple days of impact assessments."[220] However, efforts to understand community dynamics are stymied by the logistics of selecting, training, and resourcing people also pose challenges. "How do you train them so those things are done in a consistent way? So I guess I share that because I while we do do [post-occupancy evaluation] sometimes, I think there are certain types of projects, where it does make sense for a local entity to be the one leading that."[221] Further research ought to consider the very important logistical challenges to equitable and neutral development and deployment of metrics and methods.

These remaining questions about metrics and methods for social outcomes assessment coalesce in a parallel conversation about the fundamental approach to social outcomes assessment. Should social outcomes assessment occur on a project-based level or systemic level? The merits of a "diagnostic" approach—a simpler, faster, and less scientific methodology—versus those of an "academic-based" approach that is a longer, more scientific, peer-reviewed study raise important questions about the kind of POE that will be most valuable to advancing study of social outcomes.[222]

A project-based approach, which Becker terms "diagnostic," essentially equates to a case-study methodology. A project-based methodology can accommodate specificity of projects. The project-based approach is built into the design process and treats each project as its own reference point. While metrics would be project-specific, the methods for evaluating social outcomes may be repeated across multiple projects. The socially-committed practices discussed in Chapter 3, like MASS and Gehl, operate in this way. As mentioned above, these firms employ methods like developing partnerships with community stakeholders, establishing baseline social context, and undergoing a thorough visioning process with the client and/or partners in order to develop project-specific metrics. A diagnostic methodology emphasizes contextual nuance, offering a deep-dive into a single project. In addition, the project-based methodology is faster and simpler because it does not require extensive peer review or (relatively) time-intensive work. Instead, project-based methodology is able to answer specific questions about a specific project in a relatively short time-frame.

On the other hand is a systemic approach, which Becker refers to as "academic-based" due to the scientific methodology required for generalizable results. A systemic approach implies a more rigid methodology. In considering a systemic approach to social outcomes evaluation, it may be helpful to consider quantification of qualitative data as a means of comparison across projects. In fact, the more common forms of POE in practice largely concern quantifiable metrics that are common amongst building types, such as energy data. As discussed previously, the General Services Administration (GSA) uses this type of evaluation to study energy and operational efficiency data. As a large-scale organization with many buildings and a strong interest in codification, the GSA sets standards for outcomes across buildings, considering common metrics of success such as access to natural light or reduced energy cost. In a systemic approach, developing metrics requires extensive research and testing. However, the resulting data is more broadly applicable—a firm basis for other project decisions, for instance—and once the metrics are developed, can be used across a large number of projects without adaption. Systemic methodology would be capable of determining if a large number of projects meet pre-determined metrics of success, offering both longitudinal and cross-sectional data. Research in Chapter 2 establishes the importance of generalizable data in post-occupancy evaluation literature. The interviewee with extensive POE experience would appear to support rigorous, systemic evaluation. Architect #7 stated: "We certainly have the willingness and desire to do [post-occupancy evaluation] on a lot of our projects, but if we do it we would want to do it at a level that takes advantage of our capabilities and would derive the type of data that we think is useful."[223]

It is important to note that preservation policy already operates systemically. In fact, this thesis uses preservation policy as a generalized proxy for preservationists in Chapter 4 because preservation policy is a standardized approach to preservation. As examined in Chapter 4, there are five main preservation policy tools, but the preservation intention each inserts into an adaptive reuse project is an emphasis on retention of original historic fabric. Preservation policies operates

220 Interviewee #8, in conversation with the author.
221 Interviewee #8.
222 Becker, "Post-Occupancy Evaluation," 225.
223 Architect #7, in conversation with the author.

consistently across projects, using standard definitions and a system within which project-based engagement can occur, such as preservation review and designation. While the policies inherently operate systemically, the systemic approach must also account for the historic, architectural, and cultural context surrounding historic sites. In other words, because the standards by which policy deems a site to be of value (architectural, historical, and cultural value) are contextual, some degree of project specificity is embedded in the larger policy. Historic preservationists have found a way to make that work, diving into each building individually with historic research. It appears that the skillset and policy framework already exist to support assessment based in social context as well.

The specificity and complexity of social relationships appears to be in tension with any efforts to establish generalizable metrics and methods for social outcomes assessment. In fact, the socially-committed practices described in Chapter 3 approach social context and project outcomes development with an eye to context. The diagnostic, case-study methodology supports this client-, mission-oriented mode of practice. Metrics support the specific project goals. However, a systemic social outcomes evaluation would work well with project types that are intended to share certain uniformity. While adaptive reuse projects are far from uniform, they share the very important quality of being of value to the community. Further, adaptive reuse projects are held to certain uniform standards laid out in preservation policy.

Preservation Policy Intention

The thesis examines paradigms of architectural practice in relation to historic preservation, considering the architect's role in setting preservation intention. Research findings about intention-setting, post-occupancy evaluation, and perception of social benefit raise questions about how preservationists (via preservation policy) do, could, and should support social outcomes evaluation of adaptive reuse. As explained in Chapter 4, preservation policy is considered as a generalized proxy for preservationists in this thesis. However, the thesis considers a full analysis of preservation policy and social outcomes complementary, but not within, the scope of research.

Chapter 4 establishes that there are critical differences in how clients, preservationists, and architects set intention. Preservation policy has a key seat at the table in setting preservation intention through policy tools, such as regulation, incentives (like the Federal Rehabilitation Tax Credit), and information (such as The Secretary of the Interior's Standards for Rehabilitation). The policy tool of information, in particular, impacts what information architects have available in setting a preservation strategy. With such an influential position, what role should preservation policy have in setting preservation intention? What could or should be the role of a client, architect, and preservation architect in setting preservation intentions? Preservation policy currently sets intention through a variety of policy tools discussed in Chapter 4. These preservation policy tools generally result in an intention of retaining as much historic fabric as possible. As such, preservation policy typically favors architectural and historical values as established by experts over social values established by non-expert publics.[224] The expert-driven significance assessment stands opposite the partnership-driven socially-committed practices discussed in Chapter 3. Considering the intention-setting process of each practice side-by-side, it becomes clear that preservation policy neglects consideration of current social context in preservation intention. However, how could or should preservation policy set intention? What would need to change in preservation policy in order to allot more weight to social outcomes in preservation intention?

Low-hanging fruit may involve the policy tool of information, alongside technical support, about social outcomes in the historic built environment, as is already beginning to happen (conversations around inclusivity of diverse narratives at historic sites, more historic sites representing non-dominant narratives, individuals, and communities. Recent preservation discourse has also involved a move to re-think assessment for historic designation to embrace the more inclusive values-based assessment. As discussed in Chapter 3, values-based assessment provides a strategy for embedding social values in intention. How could policy re-define "significance" to take current and future social context into consideration? Further research might study the impacts of re-defining significance in policy—from historic, architectural, and cultural values—to include social values. Such a change would affect the way architects also treat historic fabric. New policy definitions of significance could systemically change the way architects intervene and operate on historic buildings.

As mentioned in this chapter, the logistical challenges of assessing social outcomes of adaptive reuse relate back to the foundational debate between a systemic and project-based approach. In thinking through preservation policy and the

224 Avrami and Mason, "Mapping the Issue of Values."

preservationist's role in evaluating social outcomes of adaptive reuse, it is worth returning to the point that preservation policy sets up an expectation of public benefit, and that preservation policy already operates systemically. However, as mentioned above, the logistical challenges of establishing metrics for evaluating social outcomes, methods supportive of expectations, and the existing systemic approach are outside the scope of this research. It would be an excellent topic for further research.

In Conclusion

The thesis seeks to inform architectural practice in relation to social outcomes and the historic built environment. Through research methodology encompassing a critical review of relevant literature, comparative practices analysis, and interviews with practitioners, the findings bring forward dynamics of intention-setting, barriers and opportunities to post-occupancy evaluation as a framework for social outcomes assessment, and differing perceptions and descriptions of what constitutes social benefit. The findings, however, perhaps raise more questions than they answer. The difficulties of how to establish social outcomes metrics and methods must balance the advantages of speed, rigor, and generalizable data. Research questions about paradigms of architectural practices emerge with further questions about the architect's role in setting preservation intention, establishing social outcomes metrics, and catalyzing and studying urban-scale impacts of adaptive reuse. While the thesis examines paradigms of architectural practice and brings forward questions about the role of architects, ultimately the thesis seeks to strengthen the field through catalyzing further research. Social outcomes research is a tool to build capacity for improving social outcomes of adaptive reuse. A critical lens can help strengthen the practice, if the field can respond to it.

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Appendix A: Interview Questions

Multiple-Choice Questions

What resources or methods do you use when conducting historic site research?

Historic photographs

Sanborn maps

Written archival material (letters, legal documents, etc.)

Property ownership documents (deeds, financial records, etc.)

Census data

National Register of Historic Places, LPC, or other relevant designation report

Formal analysis

In-person site observation

Original drawings / drawings of previous interventions

Oral histories

Interviews (of local residents / long-time residents)

Historic newspapers, journals, books

Secondary sources such as books or articles written about the building/site

Other (please explain)

What are the biggest challenges in establishing site significance?

Time

Budget

Client demands / interest

Data availability

Employee skill set / ability

Other (please explain)

When do clients request a maintenance plan?

At the beginning of the project

During SD

During CD

During CA

Never

I suggest a maintenance plan

Do clients typically want a maintenance plan when you suggest it?

Yes

No

What factors most significantly impact your firm's design decisions?

Client demands / feedback

Program demands

Previous similar projects and lessons learned

Budget

Sustainability concerns and/or LEED, Living Building Challenge, or other sustainability standards

Occupant wellness concerns and/or WELL building standard

Permitting / Public review process

Building Code

Secretary of the Interior's Standards for Rehabilitation

Social inclusion, social justice, or other social interest

Other (please explain)

On what percent of projects do clients request additional work at some future point?

0-10%

10-25%

25-50%

50-75%

75-100%

On what percent of projects do you carry out post-occupancy evaluation?

0-10%

10-25%

25-50%

50-75%

75-100%

What actions do you typically undertake at the conclusion of a project?

Create as-built drawings

Photograph the building

Publicize the building completion

Conduct a post-occupancy evaluation

Prepare for additional phases of work

Certify substantial and final completion

Assess successes and obstacles throughout the project development and construction

Other (please explain)

Open-Ended Questions

Research

How do you identify the most important features of the existing site/building?

In the planning and design phases, what do you pay particular attention to during site visits?

Design

What have you found are the most effective design moves for preserving or highlighting those elements? (Example?)

Can you identify a case where a feature of an existing building—that you had made a case for preserving—was preserved inadequately or even demolished?

What are the top three guiding principles for your work?

Post-Occupancy

In cases where you have either formally or informally conducted post-occupancy evaluations on your projects / revisited projects some amount of time after finishing it, what do you look for? How do you document those things?

Can you give me an example of a visit where you noticed a change in the neighboring community or immediate vicinity of the building?

Can you give me an example where you were able to apply lessons-learned from one project to another?

What would you like to know about how your designs have performed over time? Do you have a hunch about the answer?/push for explanation

Under what circumstances could you foresee undertaking a post-occupancy evaluation / otherwise following the evolution of a building after completing the project? (contract requirements, client motivation, research)

Social

Are there any projects--whether yours or others--that could be examples of projects that had social inclusion as a goal?